

A profitable Treatise
of the Anatomie
of mans body.

Comppled by that excellent
Chirurgion, M. Thomas
Vicary Esquire, Seriaunt
Chirurgion to king Henry the
eyght, to king Edward the. vj. to
Quéene Mary, and to our most
gracious Soueraigne Lady
Queene Elizabeth, and also
chæfe Chirurgion of S.
Bartholomewes
Hospital.

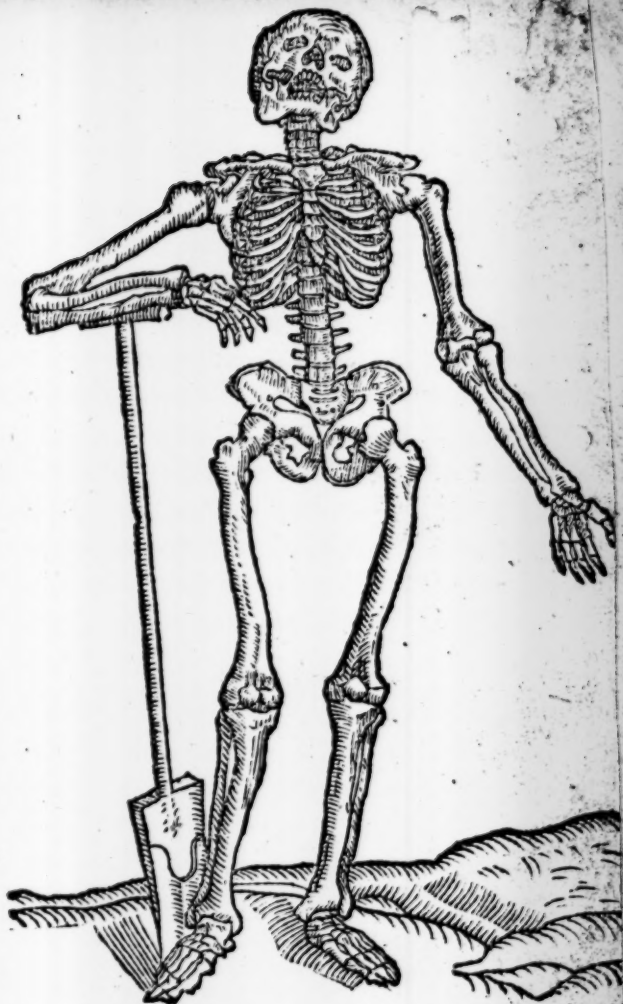
Which work is newly reuyued,
corrected, and published by the
Chirurgions of the same
Hospital now béeing.

An. 1577.

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Nowe he that is the perfect guyde,
doth knowe our helpes were here alone,
By homely style it may be spyde,
for rules in Rethorike haue we none :
Our heads doo lacke that fyled phrase,
whereon fine wittes delight to gasc.
If any say we deserue heere blame,
we pray you then amende the same.



TO THE RIGHT
Worshipful, Sr. Rou-

land Haiwarde Knight, President
of little Saint Bartholomewes in

West Smithfeelde, Sr. Am-
brose Nicholas Knight, Maister

Alderman Ramsey, vvith the

rest of the worshopful Ma-

sters and Gouvernours

of the same

William Clowes, Wil. Beton,

Richard Story, and Edward Bayly,

Chirurgions of the same Hospital,

wishe health and prosperitie,



He People

in times past did
prayse and ex-
toll by Pictures
and Epigrames,
the famous de-
des of all sutch
persons, vvho so

euer in any vertuous qualitie or Libe-
ral Science excelled. *Sulpitius Gallus* a-
mong the *Romanes* vvvas highly renouv-

¶.iij.

med

The Epistle

med for his singuler cunning in *Astro-*
nomie, by vvhose meanes *Lucius Paulus*
obteyued the victorie in his vvarres a-
gaynst *Percius*. *Pericles* also among the
Athenians vvas had in great admiration
and honour for his profounde knowv-
ledge in *Philosophie*, by vvhom the
vvhole Citie of *Athens* vvas from care
and vvoe deliuered, vvhen they suppo-
sed their destruction to be neare at hand,
by a blacke darknes of some admiration
hanging ouer their Citie. Howe ho-
norablely vvas *Apelles* the Paynter esteem-
ed of mightie king *Alexander*, by whō
onely he desired to be paynted. But a-
mongst all other Artes and Sciences,
vvhose prayse in tymes past flourished
and shined most brightly, *Chirurgerie*
among the vvise *Grecians* lacked not his
prayse, honour, and estimation. For dyd
not that vvorthy and famous captayne
of the Greekes *Agamemnon* loue dearely,
and rewarde bountifully both *Podalerius*
and *Nacham* through vvhose cunnings
skill in *Surgerie*, thousands of vvorthy
Greekes

Dedicatorie.

Greekes vvere saued aliue and healed,
vvhoe els had dyed and perished. And
further heere to speake of *Philoneter*, of
Attalus, of *Hiero*, of *Archelaus*, and of
Iuba, kinges of famous memorie, vvhoe
purchased eternal prayse by their study
and cunning in Phisicke and Surgery.
But novve in these our dayes enuie so
ruleth the roost, that Phisicke should be
condemned, and Surgerie despised for
euer, but that sometime payne biddeth
battayle, and care keepeth skirmishe, in
suche bytter sorte, that at the last this
Alarum is sounded out, Novve come
Phisicke, and then helpe Surgerie. Then
is remembred the saying of *Iesus the sonne*
of Sirache which is notable, Honour the
Phisition and Chirurgion for necessitie,
vvhom the almightie God hath created,
because from the hiest commeth Me-
dicine, and they shal receyue gyftes of
the King. VVherefore vve exhort the
vvyse man that he in no tyme of pro-
speritie and health, neglect these noble
Artes

The Epistle

Artes and mysteries of Phisicke and Chirurgie, because no age, no person, no countrey can long time lacke their helpes and remedies. VVhat is it to haue landes and houses, to abounde in siluer and golde, to be deckt with pearles and Diamondes, yea and to possesse the vvhole vvorld, to rule ouer Nations and countreys: and to lacke health, the cheefest Iuel and greatest treasure of mans lyfe and delight.

Consider then vvee beseeche your VVorships, vvhat prayses are due to suche noble Sciences, vvhicke onely vvorke the causes of this aforesayde health, and hove muche the vveale publique are bounde to al them, whose cares and studies daylye tendeth too this ende. Amongst vvhom heere is to be remembred *Master Vicary* Esquire, Seriaunt Chirurgion to Kinges and Queenes of famous memorie: VVhose learned vvorke of the Anatomie is by vs the forenamed Surgions of Saint Bartho-

Dedicatorie.

Bartholomewes in Smithfeelde, newly
reuiued, corrected & published abroad
to the commoditie of others, vvho be
Studentes in Chirurgerie: not vvithout
our great studies, paynes and charges.
And although we do lack the profound
knowledge and sugred eloquence of the
Latin and Greeke tongues, to decke and
beautifie this vvorke, yet we hope the
studious Reader shal thereby reape sin-
gular commoditie and fruite, by reading
this little Treatise of the Anatomie of
mans body, the vvhich is onely ground-
ed vpon reason and experience, which
are two principal rootes of Phisicke
and Surgerie. As it is graunted by *Galen*
in his thirde Booke *De Methode medendi*:
and vve vvho dayly worke and practise
in Surgerie, according to the deepnes of
the Arte, aswel in greuous vvounds,
Vlcers, and Fistules, as other hyd and
secrete diseases vpon the body of man,
dayly vsed by vs in S. Bartlemews Hos-
pital, and other places. &c. Those poore
and

The Epistle

and greeued creatures, aswell men and women, as children do knowe the profite of this Art to be manyfolde, and the lacke of the same to be lamented. Therefore Galen truely vvriteth, saying, That no man can vvorke so perfectly as aforesayde, vvithout the knowvledge of the Anatomie; For (sayth he) it is as possible for a blinde man to carue and make an Image perfect, as a Chirurgion to vvorke vvithout errour in mans body not knowving the Anatomie. And further, for as muche as your VVorships are very careful for those poore and greeued creatures vvithin the Hospital of S. Bartlemewes. &c. vvhereof Master Vycarie vvas a member: VVe are therefore novve encouraged to Dedicate this little vvorke of the Anatomie, beeing his and our trauayles, to you as Patrons of this Booke, to defende agaynst the rauening Iauves of enuious Backbyters, vvhicke neuer cease by all vnlawful meanes to blemishe and deface

Dedicatorie.

face the vvorkes of the larned, expert, and
vvell disposed persons. Finally, vve do hum-
bly craue of your Goodnesses, to accept in
good part this Treatise concerning the Ana-
tomie, as the fruites of our studies and labours,
vvhereby wee shal be muche better encou-
raged to set forth hereafter other profitable
vvorkes for the common vvealth. Heerein
yf your V Visedomes doo vouchsafe to heare
our requestes, and to alovve these our doo-
inges, as dyd noble Amasus king of Egypt
accept the labours of his payneful Artificers,
vve haue not onely to thanke your VVor-
ships for so dooing, but also to pray alway
for you vnto the almightie God to re-
quite your goodneses, receyuing
you into hys protection
and keeping.
Amen.

¶ To the Reader.



EARE Brethren,
and freendly Rea-
ders, we haue here
according to the
truth and meaning
of the Authoz, set
forth this needeful
and necessarie worke concerning the
Anatomy of mans body, beeing collec-
ted and gathered by master Thomas
Vicary, and now by vs the Chirur-
gions of Sainct Bartholomewes Hos-
pital reuiued, corrected, and published.
And albeit this Treatise be small in
Volume, yet in commoditie it is great
and profitable. Notwithstanding, if
the thinges therein conteyned be not
discretly and wisely studied and ap-
plied, according to the true meaning
of the Authoz, wee haue to tell you
hereof, that therein is great peryl, be-
cause through ignoraunt Practicio-
ners,

To the Reader.

ners, not knowing the Anatomie,
commonly doth ensue death, and se-
peration of soule and body. Further-
more, whereas many good and lear-
ned men in these our dayes, doo cease
to publishe abroad in the English
tounge their workes and trauayles,
it is, for that if any one fault or ble-
mishe by fortune be committed, ey-
ther by them or the Printer escaped,
they are blamed, yea and condemned
for ignorant men, and errour hol-
ders. But now we here cease from
these poyntes to trouble the gentle
Reader with longer discoursing, for
whose sakes and commodities wee
haue taken these paynes: wishing
that men more skilful and better
learned would haue borne this
burthen for vs. Craving onely thus
much at your handes, for to correct
our faultes fauourably, and to re-
porte of the Author courteously, who
sought

To the Reader.

sought (no doubt) your commodi-
ties onely, and the profite of the com-
mon wealth, without prayse and
bayneglory of him selfe. Thus wee
the Chirurgions aforesayde, com-
mit you to the blessed keeping of
Almighty God, who alwayes
defende and increase your
studies and ours.
Amen.

O Lorde which made the loftie Skyes,
worke in our Rulers hartes,
Alwayes to haue before their eyes
safegarde to godly Artes.



Thomas Vycarie to
his Brethren practising
Chirurgerie.

HEERE AFTER
foloweth a little treatise
of the Anatomie
of mans body, Made
by Thomas Vycarie
Citizen and Chirurgion of London,
for all suche young Brethren
of his Fellowship practising
Chirurgerie. Not for them that be
expertly seene in the Anatomie:
for to them Galen the Lanterne
of all Chirurgions, hath set it
foorth in his Canons, to the
high glory of God, and too
the erudition and knowledge
of al those that be expertly
seene and learned in the
noble Science of Chirurgerie.
And because al the noble
Philosophers wryting vppon
Chirurgerie, doo
con-

condemne al suche persons as pra-
ctise in Chirurgie not knowing
the Anatomie. Therefore I haue
drawen into certayne Lessons and
smal Chapters, a parte of the Ana-
tomie, but touching a part of euery
member particularly : Requiring
euery man that shal reade this lit-
tle Treatise, to correct and amend
it where it shal be neede, and holde
me excused for my bolde enter-
prise, and accept my good
wyl towards the
same.



A breefe Treatise of
of the Anatomie of mans body : Com-
pyled by me *Thomas Vycarie* Esquire,
and Sargeant Chirurgion to king
Henry the eyght, for the vse and
commoditie of al vnlearned
Practicioners in Chi-
rurgerie.



IN the name of God, A-
men. Heere I shal declare
vnto you shortly and bzeefly
the sayinges, and the deter-
minations of diuers aun-
cient Authoꝝs, in thzee poyntes. very
expedient for al men to knowe, that en-
tende to vse oz exercise the mysterie oz
arte of Chirurgerie. The first is, to
knowe what thing Chirurgerie is : The
second is, how that a Chirurgion should
be chosen : And the thirde is, with what
properties a Surgion should be indued.

THE fyrst is to knowe what thing
Chirurgerie is. Heerein I doo
note the saying of Lamfranke,
whereas he sayth, All thinges that man
A. j. would

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would knowe, may be knowen by one of these three thinges: That is to say, by his name, or by his working, or els by his very being and shewing of his owne properties. So then it followeth that in the same manner we may know what Chirurgerie is by three thinges. First by his name, as thus, The Interpreters write, that Surgerie is deriued oute of theie wordes, Apo tes chiros, cai tou ergou, that is too bee vnderstanded, A hand working, and so it may be taken for al handy artes. But noble Ippocras sayth, that Surgerie is hande working in mans body, for the very ende and profite of Chirurgerie is hande working. Nowe the seconde manner of knowing what thing Chirurgerie is, it is the saying of Auicen to be knowen by his beeing, for it is verely a medecinal science: and as Galen sayth, he that wyl knowe the certentie of a thing, let him not busie him selfe to knowe only the name of that thing, but also the working and the effect of the same thing. Nowe the thirde way to knowe what thing Chirurgerie is, It is also to be knowen by his beeing
or

of the Anatomie.

or declaring of his owne properties, the
which teacheth vs to worke in mannes
body with handes: as thus, In cutting
or opening those partes that be whole,
and in healing those partes that be bro-
ke nor cut, and in taking away that that
is superfluous, as warts, wennes, skur-
fulas, and other lyke. But further to de-
clare what Galen sayth Surgery is,
It is the laste instrument of medicine:
That is to say, Dyet, Pociō, and Chi-
rurgerie: of the whiche thre, sayth he,
Dyet is the noblest, and the most ver-
tuous. And thus he sayth, whereas a
man may be cured with Dyet onely, let
there be geuen no maner of medicine.
The seconde instrument is Pociō: for
and if a man may be cured with Dyet
and Pociō, let there not be ministred
any Chirurgerie. The thirde and laste
Instrument, is Chirurgerie, thzough
whole vertue and goodnes is remoued
and put away many greuous infirmi-
ties and diseales, which might not haue
bene remoued nor yet put away, neither
with Diet, nor with Pociō. And by
these thre meanes it is known what
thing Chirurgerie is. And this suffiseth

A.y.

for

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for vs for that poynt. Nowe it is known what thing Chirurgerie is, there must also be chosen a man apt and mete to minister Surgerie, or to be a Chirurgeon. And in this poynt al Authoꝝ doo agree, that a Chirurgeon should be chosen by his complexion, and that his complexion be very temperate, and al his members wel proportioned. For Rasis sayth, Whose face is not seemely, it is vnpossible for him for to haue good manners. And Aristotle the great Philosopher writeth in his Epistles to the noble king Alexander (as in those Epistles moze playnely doth appeare) howe hee should choose al suche persons as should serue him, by the forme and shape of the face, and al other members of the body. And furthermoze they say, he that is of an euill complexion, there must needes folowe like conditions. Wherefoze it agreeth that a Chirurgeon must be both of a good and temperate complexion, as is afoze rehearsed. And principally, that he be a good lyuer and a keeper of the holy commaundements of God, of whom commeth al cunning and grace, and that his body be not quaking, and his hands
sted:

of the Anatomie.

stedfast, his fingers long and smal, and not trembling : and that his left hand be as ready as his right hande, with al his lymmes able to fulfil the good woꝝkes of the soule. Nowe here is a man meete to be made a Chirurgion. And though he haue al these good qualities befoze reher- sed, yet is he no good Chirurgion, but a man very fitte and meete therfoze. Now then to knowe what properties and con- ditions this man must haue befoze he be a perfect Chirurgion. And I doo note foure thinges moſte ſpecially that euery Chirurgion ought foꝝ to haue: The firſt that he be learned : the ſeconde, that he be expert : the thirde, that he be ingeni- ous: the fourth, that he be wel manered. The firſt (I ſayde) he ought to be lear- ned, and that he knowe his principles, not onely in Chirurgerie, but alſo in Phiſicke, that he may the better defende his Surgery. Alſo he ought to be ſeene in natural Philoſophie, and in Grāmer, that he ſpeake congruitie in Logike, that teacheth him to proue his proportions with good reaſon. In Rethorike, that teacheth him to ſpeake ſeemely and elo- quently: alſo in Theozike, that teacheth him

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him to knowe thinges natural and not natural, & thinges agaynst nature. Also he must knowe the Anatomie, for al authors write against those Surgions that worke in mans body not knowing the Anatomie, for they be likened to a blind man that cutteth in a vine tree, for he taketh more or lesse then he ought to doo. And here note wel the saying of Galen the prince of Philosophers, in his Estorris, that it is as possible for a Surgion not knowing the Anatomie, to worke in mans body without error, as it is for a blind man to carue an Image & make it perfect. The ij. I said, he must be expert: for Rasus sayth, he ought to knowe and to see other men work, and after to haue vse and exercise. The thirde, that he be ingenious or wittie, for al things belonging to Chirurgerie may not be written, nor with letters set forth. The fourth I sayde, that he muste be wel manered, and that he haue al these good conditions here folowing: first, that he be no spousbreaker, nor no drunkarde. for the Philosophers say, amongst all other thinges beware of those persons that followe Drunkennes, for they be accompted for
no

of the Anatomie,

As men, bicause they liue a life bestiall :
wherfore amongst al other sortes of peo-
ple, they ought to be sequestred from the
ministring of medicine. Likewise a Chi-
rurgion must take heede that he deceiue
no man with his vayne promises, for to
make of a smal matter a great, because he
woulde be counted the more famous.
And amongst other things they maye
neither be flatterers, nor mockers, nor
priuie backbyters of other men. Like-
wise they muste not be proude, nor pre-
sumptuous, nor detracters of other mē.
Likewise they ought not to be too coue-
tous, nor too nigarde, & namely amongst
their frēdes, or men of worshop, but let
them be honest, curteous, and free, both
in worde and dedde. Likewise they shal
griue no counsaile except they be asked,
and then say their aduise by good delibe-
ration, and that they be wel aduised afoze
they speake, chesly in the presence of wise
men. Likewise they muste be as priuie
and as secrete as anye Confessour, of
al thinges that they shal eyther heare or
see in the house of their Pacient. They
shal not take into their cure any maner
of person, except he wyl be obedient vnto
their

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their preceptes, for he can not be called a patient, vnlesse he be a sufferer. Also that they doe their diligence aswel to the poore as to the riche. They shal neuer discom- fort their patient, and shall commaunde all that be about him that they doe the same, but to his frendes speake truthe as the case standeth. They must also be holde in those thinges whereof they be certayne, and as dreadfull in al perilles. They may not chide with the sicke, but be alwayes pleasaunt and mery. They must not couet any woman by waye of bylanie, & specially in the house of their Patient. They shal not for couetousnes of money take in hande those cures that be vncurable, nor neuer set any certaine day of the sickemans health, for it lyeth not in their power: folowing the distinct counsaile of Galen, in the amphorisme of Apocras, saying, Oportet seipsum non solum. By this Galen meaneth, that to the cure of euery soze there belongeth foure thinges: of which, the first and principal belongeth to God, the second to the Surgion, the thirde to the Medicine, and the fourth to the Patient. Of the which foure and if any one doe faile, the

Pa-

of the Anatomie.

Pacient can not be healed : then they, to whom belongeth but the fourth parte, shal not promise the whole, but bee first wel aduised. They must also be gracious and good to the poore, and of the rich take liberally, for bothe. And see they neuer prayse them selues, for that redoundeth moze to their shame and discredite, then to their fame & worship : For a cunning and skilful Chirurgion neede neuer baue of his dooings, for his works wyll euer get credite ynough. Likewise that they despise no other Chirurgion without a great cause : for it is meete that one Chirurgion should loue another, as Chyriste loueth vs al. And in thus dooing they shal increase both in vertue & cunning, to the honour of God and worldly fame. To whome he bring vs al. Amen.

¶ Heereafter foloweth the Anatomic of the simple members.

AN if it be asked you how many simple members there be, it is to be answered, eleuen, and two that be but superfluities of members:
B. J. and

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and these be they, Bones, Cartylages, Nerues, Vannykles, Lygaments, Cordes, Arteries, Veines, fatnes, fleshe and Skinne: and the superfluities be the heares & the nayles. I shal beginne at the Bone, because it is the fundation, and the hardest member of al the body. The Bone is a consimile member, simple and spermatike, and colde and dry of complexion, insensible, and inflexible: and hath diuers formes in mans body, for the diuersitie of helpings. The cause why there be many bones in mans body is this: Sometime it is needeful that one member or one symme should moue without another. Another cause is, that some defende the pzinpal members, as dothe the bone of the brest, and of the head: and some to be the fundation of diuers partes of the body, as the bones of the Ridge, and of the legges: and some to fultyll the hollowe places, as in the handes and fete. &c.

The Gryste is a member simple and spermatike, next in hardnes to the bone, and is of complexion colde and drye, and insensible. The gryste was ordeyned for sixe causes, or profite that I fynd in it: The first is, that the continual moving

uing of the hard bone might not be done in a iuncture, but that the grystle should be a meane betwene the Lygament and him: The seconde is, that in the time of concussion or oppzession, the softe members or limmes should not be hurt of the harde: The thirde is, that the extremitie of bones and Ioyntes that be grystly, might the easelyer be folded and moued together without hurt: The fourth is, for that it is necessarie in some meane places to put a grystle, as in the throte bowel for the sounde: The fyfth is, for that it is needeful that some members be holden vp with a grystle, as the liddes of the eyes: The sixth is, that some limmes haue a sustayning and a drawing ab2od, as in the nose and the eares. &c.

The Lygament is a member consist-
ple, simple, and spermatike, next in hard-
nes to the grystle, and of complexion cold
and dry, and is flexible and insensible,
and byndeth the bones together. The
cause why he is flexible and insensible is
this: If it had bene sensible, he mighte
not haue suffred the labour and mouing
of the ioynts: and if it had not ben flexi-
ble of his bowing, one lymme should not
haue moued without another. The se-

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conde profite is, that he be ioyned with sinewes, for to make Cordes & Brawnes: The thirde helpe is, that he be a resting place to some sinewes: The fourth profite is, that by him the members that be within the body be sustayned, as the matrix and kidneyes, and diuers other. &c.

The Sinew is a consimiler member, simple and spermatike, meane betweene harde and softe, and in complexion colde and drye, and he is both flexible and sensible, strong and tough, hauing his beginning from the braine, or fro Mynuca, whiche is the marrow of the backe. And from the brayne commeth. vii. payre of Nerves sensatiues, and from Mynuca commeth. xxx. payre of Nerves motius, and one that is by him selfe, that springeth of the last spondel. All these senewes haue both feeling and mouing, in some more, and in some lesse. &c.

A Corde or Tendon is a consimile or official member, compounde and spermatike, synowpy, strong, and tough, meanly betweene hardenes and softnes, and meanely sensible and flexible, and in complexion colde and dry. And the Corde or Tendon is thus made: The synewes that

of the Anatomie.

that come from the brayne & from Muscu-
nuca, and go to moue the members, is
intermingled with the Lygamentes, and
when the Synewes and Lygamentes
are intermingled together, then is made
a Corde. And three causes I perceiue
why the Cordes were made: The fyrst
is, that the Synewe alone is so sensible
that he may not suffer the great labour
and trauel of mouing, without the fe-
lowship and strength of the Lygament
that is insensible, and that letteth his
great feeling, and bringeth him to a per-
fect temperaunce, and so the Cordes
moue the limmes to the wil of the soule.
And this Corde is associated with a sim-
ple flesh, and so therof is made a brayne
or a muskel, on whom he might rest af-
ter his trauel. And this Brayne is cal-
led a Muskle. Then when this Corde
is entred into this brayne, he is depar-
ted into many smal threeds, the whiche
be called wythe. And this wythe hath three
properties: The fyrst is in length, by
whose vertue that draweth it hath might:
The soconde in bzeadth, by whome the
vertue that casteth out hath might: The
third in thwartnes, in whom the vertue
that

*with
with*

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that holdeth hath might : and at the ende of the Brazone those threedes be gathered together to make another muskel. &c

Nowe I wyl begynne at the Artere. This Artere is a member consimple, simple and spermatike, hollowe and synowey, hauing his springing from the hart, bzinging from the harte to euery member blood and spirite of lyfe. It is of complexion colde and drye. And al these Arteres haue two cotes, except one that goth to the Lungen, and he hath but one cote that spreadeth abrode in the Lungen, and bzingeth with him to the Lungen blood, with the spirite of lyfe to nourishe the Lungen withal : and also that Artere bzingeth with him from the lungen ayre to temper the fumous heate that is in the harte. And this Artere is he that is called *Arteria venalis*, because he hath but one cote as a bayne, and is more obedient to be delated abrode through al the lungen, because that the blood might the sooner sweate through him: wheras al other Arters haue two cotes, because one cote may not withstande the might and power of the spirit of life. Diuers other causes there be, which shal be declared in the

of the Anatomie.

the Anathomie of the brest. cc.

The Veyne is a symple member, in complexion colde and drye, and spermatike, like to the Artere, hauing his beginning from the Apuer, and bringing from the Apuer nutritiue blood, to nourishe euery member of the body with. And it is so to be vnderstanded that there is no moze difference betweene these two vessels of blood, but that the Artere is a vessel of blood spiritual oz vptal. And the Veyne is a vessel of blood nutrimental, of the which Veynes there is noted two most p[ri]ncipal, of the which one is called vena porta, the other is called venacelis, of whom it is too much to treat of now, vntill we come to the anathomie of the wombe. cc.

The flesh is a consimiler member, simple, not spermatike, and is ingendred of blood congeled by heate, and is in complexion hote and moyst. Of the which is noted thzee kindes of fleshes: that is to say, one is soft & pure fleshe: the seconde is musculus oz hard & browny fleshe: the thirde is glandulus, knotty, oz kurnelly fleshe. Also the commodities of the fleshe be indifferent, for some be common to
euery

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euery kinde of fleshe, and some be proper to one maner of fleshe alone. The profytes of the fleshe be many, for some defende the bodye from colde as dothe clothes: also it defendeth the body from harde thinges comming agaynst it: also thzough his moysture he rectifieth the body in sommer, in time of great heate. Wherefoze it is to be considered what profitableness is in euery kinde of fleshe by him selfe. And fyrst of simple and pure fleshe, whiche fulfylleth the concauities of voyde places, and causeth good forme and shape: and this fleshe is founde betweene the teeth, and on the ende of the yerde. The profite of the Bzabony fleshe oz musculus fleshe, shal be spoken of in the Anathomie of the armes. The profitcs of the Glandulus fleshe are these: First, that it turneth the blood into a colour like to him selfe, as doth the fleshe of a womans paps turne the menstrual blood into mylke: secondly, the Glandulus fleshe of the Testikles, turneth the blood into sparne: thirdly, the Glandulus flesh of the checkes, that ingendzeth the spittle. &c.

The next is of fatnes, of the whiche

I finde three kindes : The firste is Pinguedo, and it is a consimular member, not spermatike, and it is made of a subtyl portion of blood congeled by colde; and it is of complexion colde and moyst, insensible, and is intermedled amongst the partes of the fleshe. The seconde is Adeppes, and is of the same kinde as is Pinguedo, but it is departed from the fleshe besydes the skinne, and it is as an oyle heating and moysting the skinne. The thirde is Auxingia, and it is of kinde as the others be, but he is departed from the fleshe withinfoorth about the kidneys, and in the intrayles, and it helpeth both the kidneys and the intrayles from drying by his vnctiositie. &c.

Then come we to the Skinne. The Skinne is a consimile member or officiall, partely spermatike, strong and tough, flexible and sensible, thinne and temperate, Wherof there be two kindes: One is the Skinne that couereth the outwarde members: and the other the inner members, whiche is called a Pannicle, the profitableness of whome was spoken of in the laste Lesson: But the Skinne is properly wouen

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of Threedes, Merues, Ueynēs, and Arceirs. And he is made temperate, because he should be a good decmer of heate from colde, and of moystnes from drynes, that there shoulde nothing noye nor hurt the body, but it geueth warning to the common wittes thereof. &c.

The Heyres of euery part of mans body are but a superfluitie of members, made of the grosse fume or smoke passing out of the viscoues matter, thickened to the forme of heyre. The profitablenesse of him is declared in the Anathomie of the head. &c.

The Nayles likewise are a superfluitie of members, engedged of great earth: ly smoke or fume resolued through the natural heate of humours, and is softer then the Bone, & harder then the fleshe. In complexion they be colde and drye, and are alwayes waxing in the extremitie of the fynghers and toes. The vtilitie of them are, that by them a man shal take the better holde: also they helpe to claue the body when it needeth: Lastly, they helpe to deuide thinges for lacke of other tooles, &c.

Chere:

of the Anatomie.

¶ *Heereafter foloweth the*
Anatomie of the compound mem-
bers, and first of the head,

BEcause the head of man is the habitation or dwelling place of the reasonable soule of man, therefore with the grace of God I shal first speake of the Anatomie of the head. Galen saith in the seconde Chapter De iuuamentes, and Auicen rehearseth the same in hys first preposition and third Chapter, prouing that the Head of man was made neither for Wittes, nor yet for the Braynes, but onely for the eyes. For beastes that haue no heades, haue the organes or instrumentes of Wittes in their brests. Therefore God and nature haue reared vp the head of man onely for the eyes, for it is the hyest member of man: and as a beholder or watchman standeth in a highe Towre to geue warning of the enemies, so doth the Eye of man geue warning vnto the common Wittes, for the defence of all other members of the body. Nowe to our purpose. If the question be asked, how many things be there
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conteyning on the head, and howe many thinges conteyned within the head: As it is rehearsed by Guydo, there bee but fyue conteining, and as many contained: as thus, The Heyre, the Skinne, the flesh, the Pannicles, and the Bone, neither rehearsing Veyne nor Artere. The which Anathomie can not be truly without them both, as thou shalt wel perceiue both in this Chapter, but specially in the next. And now in this lesson I shall speake but of Heire, Skinne, fleshe, Veines, Pannicles, and Bones, what profite they do to man, euery of them in his kinde. Of the Heire of the head (whose creaton is knowen in the Anatomie of the simple members) I do note foure vtilities why it was ordeyned: the fyrst is, that it defendeth the Brayne froo too muche heate, and too muche colde, and many other outwarde noyances: The seconde is, it maketh the forme of shape of the head to seeme moze seemelyer or beautifuller. For if the head were not heyred, the face and the heade should seeme but one thing, and therefore the heyre formeth and shapeth the head from the face: The thirde is, that
by

of the Anatomie.

by the cullour of the heyre is witnessed & knowen the complexion of the Brayne: The fourth is, that the fumosities of the brayne might assend and passe lyghtlyer out by them. ffor if there were a sad thing, as the skinne or other, of the same nature as the heyre is, the fumosities of the brayne might not haue passed thzowe it so lightly, as it doth by the heyre.

The Skinne of the head is more lazartus, thicker, and more porrus, than any other Skinne of any other member of the body. And two causes I note why, One is, that it keepeth or defendeth the brayne from too muche heate and colde, as doth the heyre: The other, it discusseth to the common wittes of al thinges that noyeth outwardly, for the heyre is insensible: The thirde cause why the skinne of the head is more thicker then any other skinne of the body, is this, that it keepeth the brayne the more warme, and is the better fence for the brayne, and it bindeth and keepeth the bones of the head the faster together.

Next followeth the fleshe, the which is al Musculus or Lazartus fleshe, lying vpon pericranium without meane.

And

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and it is made of subtile Mylle, and of simple fleshe, Synewes, Veines, & Arteries. And why the fleshe that is al musculus or lazartus in euery member of a mans body was made, is for thre causes: the fyrst is, that by his thicknes, he shoulde comforte the digestion of other members that lye by him: The seconde is, that thzough him euery member is made the more fozmelyer, and taketh the better shape: The thirde is, that by his meanes euery member of the body draweth to him nourishing, the which others withhold to put foorth from them: as it shal be more playnlyer spoken of in the Anathomie of the wombe.

Next followeth Pericranium, or the couering of the bones of the head. But heere it is to be noted of a Veyne and an Artere that commeth betweene the fleshy and this Pericranium, that nourisheth the vtter part of the head, and so entreteth priuily thzough the commissaries of the skul, bearing to the Brayne and to his Mannikles nourishing: of whose substaunce is made bothe Duramater, and also Pericranium, as shall be declared in the partes conteyned in the head, Here

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it is to be noted of this Danniike Pericranium, that it bindeth or compasseth al the bones of the head, vnto whom is adioyned the Duramater, and is also a part of his substaunce, howbeit they be separated, for Duramater is nerer y brayne, and is vnder the skull. This Pericranium was made principally for two causes: one is, that for his strong bynding together he should make firme and stable the feeble commissaries or seames of the bones of the head: The other cause is, that it shoulde be a meane betwene the harde bone and the softe fleshe.

Nexte is the Bone of the Pot of the head keeping in the Braynes, of which it were too long to declare their names after al Authoꝝ, as they number them and their names, for some name them after the Greeke tongue, and some after the Arabian, but in conclusion al is to one purpose. And they be numbrzed seuen bones in the pan or skul of the head: the fyrst is called the Coronal bone, in which is y Orbits or holes of the Eyes, and it reacheth from the Browes vnto the midst of the head, and there it meteth with the seconde bone called Occipissial, a
bone

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bone of the hinder part of the head called the Roddel of the head, which two bones Coronal and Occipissiale be deuided by the Commissaries in the middes of the head. The thirde and fourth bones be called Parietales, and they be the bones of the sidelings parts of the head, and they be deuided by the Comissories both from the foresayde Coronal and Occipissial. The fyfth and the sixth bones be called Petrosa or Mendosa: and these two bones lye ouer the bones called Parietals, on euery side of the head one, lyke skales, in whom be y holes of the eares. The seuenth and last of the head is called Maxillarie, or Bazillarie, the whiche bone is as it were a wedge vnto all the other seuen bones of the head, and doth fasten them togeather. And thus be all numbred: the first is the Coronal bone, the seconde is the Occipissial, the thirde and the fourth is Parietales, the fyfth and the sixth is Petrosa or Mendosa, and the seuenth is Maxillari, or Bazillari. And this suffiseth for the fyue thinges conteyning.

of the Anatomic.

In this Chapter is declared the five thinges conteyned within the head.

NExt vnder the bones of the head withinfoorth, the first thing that appeareth is Duramater, then is Diamater, then the substaunce of the Brayne, and then Vermey formes and Retemirabile. But first to speake of Duramater, whereof, and howe it is spongy and made: first it is to be noted of the Veine and Arterie that was spoken of in the laste Chapter before, howe priuily they entred thzough the commissories or seames of the head, and there by their vñion together, they doe not onely bring and geue the spirite of lyfe and nutriment, but also doo weaue them selues so togeather, that they make this pannicle Duramater. It is holden vp by certayne thzedes of him selfe comming thzough the sayd commissories, running into Pericranium or pannicle that couereth the bones of the head. And with the foresayde Veine and Arterie, and these thzedes comming from Duramater, is
D. s. wouen

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wouen and made this Pericranium. Also why this panicle Duramater is set from the skul, I note two causes: the first is, that if the Duramater shoulde haue touched the skul, it shoulde lightly haue bene hurt with the hardnes of the bone: The seconde cause is, that the matter that commeth of woundes made in the head pearcing the skul, shoulde by it the better be defended and kepte from Pia mater, and hurting of the bzayne. And next vnto this panicle there is another pannicle called Pia mater, oz meeke mother, because it is so softe and tender vnto the bzayne. Of whose creation it is to be noted as of Duramater, for the original of their fyrst creatiō is of one kind, both from the Hart and the Lpuer, and is mother of the very substaunce of the bzayne. Why it is called Diamater, is, for because it is so softe and tender ouer the bzayne, that it nourisheth the bzayne and feedeth it, as doth a louing mother vnto her tender childe oz babe, for it is not so tough and harde as is Duramater. In this panicle Pia mater is much to be noted of the great number of Veynes and Arteirs that are planted, rames-
fying

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tying thzoughout al his subſtaunce, ge-
uing to the bzayne both ſpirite and lyfe.
And this Pannicle doth circumuolue
oz lappe al the ſubſtaunce of the bzayne :
and in ſome places of the bzayne the
Veynes and the Arteries goo forth of
him, and enter into the diuiſions of the
bzayne, and there dzinketh of the bzayne
ſubſtaunce into them, aſking of the hart
to them the ſpirite of lyfe oz bzeath, and
of the Lpuer nutriment. And the afore-
ſayde ſpirite oz bzeath taketh a further
digestion, and there it is made animal, by
the elebozation of the ſpirite vital is tur-
ned and made animall. furthermoze,
why there bee moo pannicles ouer the
bzayne then one, is this, If there had
beene but one pannicle onely, eyther it
muſt haue beene harde, oz ſoft, oz meane
betweene both : If it had beene harde, it
ſhould haue hurt the bzaine by his hard-
nes : if it had beene ſoft, it ſhoulde haue
beene hurt of the harde bone : and yf it
had beene but meanely neyther hard not
ſoft, it ſhould haue hurt the bzaine by his
roughnes, and alſo haue beene hurte of
the harde bone. Therefore God and na-
ture haue ordeyined two Pannicles, the

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one harde, and the other softe, the harder to be a meane betweene the softe and the bone: and the softer to be a meane betweene the harder and the braine it selfe. Also these Vannicles be colde and dry of complexion, and spermatike.

Next is the Brayne, of which it is marueylous to be considered and noted, how this Diamater deuideth the substance of the Brayne, and lappeth it into certen selles or diuisions, as thus: The substance of the braine is diuided into three partes, or ventrikles, of which the foremost part is the moste: the seconde or middlemost is lesse: the third or hindermost is the least. And from eche one to other be issues or passages that are called Meates, through whom passeth the spirit of life too and fro. But here ye shal note that euery Ventricle is diuided into two partes, and in euery parte God hath ordeyned and set singular and seuerall vertues, as thus: first in the foremost Ventricle God hath founded and set the common Wittes, otherwise called the fyue Wittes, as Hearing, Seeing, Feeling, Smelling, and tasting. And also there is in one part of this Ventricle, the vertue that

that is called ffantastie, and he taketh al the formes oz ordinaunces that be disposed of the fiue wittes, after the meaning of sensible thinges: In the other parte of the same Ventricle is ordeyned and founded the Imaginative vertue, the whiche recepueth of the common Wittes the fourme oz shape of sensitiue thinges, as they were recepued of the common wittes withoutfoorth, representing their owne shape and ordinaunces vnto the memoratiue vertue. In the middeslel oz ventrikle there is founded and ordeyned the Cogitative oz estimatiue vertue: for he rehearseth, sheweth, declareth, and deæmeth those things that be offered vnto him by the other that were spoken of before. In the thirde Ventricle and last there is founded and ordeyned the vertue Memoratiue: in this place is registered and kept those things that are done and spoken with the senses, and keepeth them in his treasure vnto the putting foorth of the fyue oz common wittes, oz organes, oz instrumentes of animal woorkes, out of whose extremities oz lower partes springeth Mynuca, oz marrowe of the spondels: of whom it shall be

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be spoken of in the Anatomie of the necke and backe. Furthermore it is to be noted, that from the foremost Ventricle of the brayne springeth seuen payre of sensatiue or feeling seneuvs, the which be produced to the Eyes, the Eares, the Nose, the Tounge, and to the Stomack, and to diuers other partes of the body: as it shal be declared in their anatomies. Also it is to bee noted, that aboute the middest ventricle is the place of Vermiformis, with curnelly fleshe that filleth, and Metemirabile, or wonderful caule vnder the Pannicles, is sette or bounded with Arteries onely whiche come from the harte, in the whyche the vitayle spirite by his great labour is turned and made animal. And ye shal vnderstande that these two be the best kept partes of al the body, for a man shal rather dye, then any of these should suffer any manner of greefes from without: foorth, and therefore God hath set them farre from the hart. Here I note the saying of Haly Abbas, of the comming of smal Arteries from the hart, of whom (sayth he) is made a marueylous net or caule, in the which caule is inclosed the
Brayne,

Brayne, and in that place is layde the spirite of feeling, from that place hath the spirite of feeling his fyrst creation, and from thence passeth to other members. &c. furthermoze ye shal vnderstand that the brayne is a member colde and moyst of complexion, thinne, and meanely viscus, and a pincipal member, and an official member, and spermatike. And fyrst why he is a pincipal member, is, because he is the gouernour of the treasure of the spue wittes: And why he is an official member, is, because he hath the effect of feeling and stering: And why he is colde and moyst, is, that he shoulde by his coldnes and moystnes abate and temper the exceeding heate and drought that commeth from the harte: Also why it is moyst, is, that it shoulde be the moze indifferenter and abler to euery thing that shoulde be reserued or gotten into him: Also why it is soft, is, that it should geue place and fauour to the vertue of stering: And why it is meanely viscus, is, that his senewes should be strong and meanely toughe, and that they shoulde not be letted in their working throughe his ouermuche hardnes, Heere Galen demaun-

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demaundeth a question, whiche is this, Whether that feeling and mouing bee brought to Merues by one or by diuers: or whether the aforesayde thing be brought substantially or radically. The matter (sayth he) is so harde to searche and be vnderstoode, that it were much better to let it alone and passe ouer it. Aristotle intreating of the Brayne, sayth, The Brayne is a member continually mouing and ruling al other members of the body, geuing vnto them both feeling and mouing: for if the Brayne be let, al other members be let: and if the Brayne be wel, then al other members the body be the better disposed. Also the brayne hath this propertie, that it moueth and followeth the mouing of the Moone: for in the waxing of the Moone the Brayne followeth vpwardes, and in the wane of the Moone the brayne descendeth downwardes, and vanisheth in substaunce of vertue: for then the Brayne shrinketh togeather in it selfe, and is not so fully obedient to the spirit of feeling. And this is proued in menne that be lunatike or madde, and also in men that be epulenticke or hauing the falling sicknesse, that
be

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he moſte greued in the beginning of the newe Moone, and in the latter quarter of the Moone. Wherefore (ſayth Ariſtoſtle) when it happeneth that the Brayne is eyther too drye or too moyſt, then can it not worke his kinde: for then is the body made colde: then are the ſpirites of lyfe melted and reſolued away: and then foloweth ſæblenes of the wittes, and of al other members of the body, and at the laſte death.

¶ *Heereafter foloweth the* Anatomic of the Face.

THE front or the forehead con-
teyneth nothing but the Skinne
and Muſculus fleſhe, for the
panicle vnderneath it is of Pericranium,
and the bone is of the Coronal bone.
Howbeit there it is made broad as yf
there were a double bone, whiche ma-
keth the forme of the Browes. It is cal-
led the forehead or front from one Eare
to the other, and from the rootes of the
Eares of the head before vnto y^e browes.
But the cauſe why the Browes were ſet
C.j. and

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and reared vp, was, that they shoulde defende the Eyes from noyaunce without: foorth: And they be ordeyned with heare to put by the humour or sweat that cometh from the head. Also the Browes do helpe the Eyeliddes, and do beautifie and make fayre the face, for he that hath not his Browes heyled, is not seemely. And Aristotle sayth, that ouer measurable Browes betokeneth an enuious man: Also high browes and thicke betokeneth hardnes: and browes with little heare betokeneth cowardnes: and meanly signifieth gentleness of hart. Incisions about these partes ought to be done according to the length of the body, for there the Muscle goeth from one Eye to the other. And there if any incision should be made with the length of the Muscle, it might happen the Browe to hang ouer the Eye without remedie, as it is many times seene, the more pitie. The browes be called Supercilium in Latin, and vnder is the Eye liddes, whiche is called Cilium, and is garnished with heyes. Two causes I finde why the eye liddes were ordeyned: The fyrst is, that they shoulde keepe and defende the Eye from duste

duste and other outwarde noyances: the seconde is, when the eye is wæry or heauy, then they should be couered and take rest vnderneath them. Why the heyres were ordeyned in them, is, that by them is addressed the formes or similitudes of visibible thinges vnto the apple of the eye. The Eare is a member semely and graceful, able to be folden without, and is the orgayne or instrument of hearing: It is of complexion colde and drye. But why the eare was set vp out of the head, is this, that the soundes that be very fugitiue, should lurke and abyde vnder his shadowe, tyl it were taken of the instrumentes of hearing: Another cause is, that it should keepe the hole that it standeth ouer from thinges falling in that might hinder the hearing. The senewes that are the Orgayns or Instrumentes of hearing, spring each from the Brayne, from whence the seuen payre of senewes do spring, & when they come to the hole of the Eare, there they wythe lyke a wyne presse, and at the endes of them there be like the head of a woorme, or like a little teat, in whiche is receyued the sounde, and so caried to the common

E.y. wittes.

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wittes. The Eyes be nexte of nature vnto the Soule: for in the Eye is seene and knowen the disturbances & græfes, gladnes and ioyes of the Soule, as loue, wrath, and other passions. The Eyes be the instrumentes of sight. And they bee compounde and made of ten things: that is to say, of seuen Tunicles or Cotes, and of thzee humours. Of the whiche (sayth Galen) the Brayne and the head were made for the Eye, that they might be in the hyest place, as a beholder in a towre, as it was rehearsed in the Anatomie of the head. But diuers men holde diuers opinions of the Anatomie of the Eyes: for some men accompt but thzee tunikles, and some sixe. But in conclusion they meane all one thing: for the very truth is, that there be counted and reckoned seuen Tunikles, that is to say, Sclerotica, Secondyna, Retyna, Vnia, Cornua, Arania, and Coniunctiua: and these thzee humours, That is to say, humor Vitrus, humor Albigynus, and humor CrySTALLINUS. It is to be knowne howe and after what maner they spring: You shal vnderstande that there springeth of the brayny substaunce of his for-
most

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most Ventricks, two senewes, The one from the right side, and the other from the left, and they be called the fyrst payre, for in the Anatomie they be the first paire of senewes that appeare of al seuen. And it is shewed by Galen, that these senewes be hollowe as a reede, for two causes: The fyrst is, that the visible spirit might passe freely to the Eyes: The second is, that the forme of visible thinges mighte freely be presented to the common wits. Nowe marke the goeing forth of these senewes: When these senewes goo out from the substance of the Brayne, he cometh thzough the Diamater, of whose substance he taketh a Mannicle or a Cote: and the cause why he taketh that Mannicle, is to keepe him from noying, and befoze they enter into the skul, they meete and are vnited into one senewe the length of halfe an inche: and then they depart agayne into two, and eche goeth into one eye, entring thzough the brayne panne, and these senewes be called Nerui optici. And thzee causes I finde why these Nerves are ioyned in one befoze they passe into the Eye: First, if it happen any diseases in one eye, the other should

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should receiue all the visible spirite that
before came to bothe: The seconde is,
that all thinges that we see shoulde not
seeme two: for if they had not bene ioy-
ned together, euery thing shoulde haue
seemed two, as it doth to a woyme, and
to other beastes: The thirde is, that the
Sence might stay and helpe the other.
But heerevpon Lamfranke accordeth
much, saying, that these two Sences
come together to the Eyes, and take a
Panicle both of Diamater and of Du-
ramater, and when they enter into the
Orbytt of the Eye, there the extremities
are spread abroade, the which are made
of three substances: that is to say, of Du-
ramater, of Diamater, and of Nerui
optici. There be ingendred three Tun-
icles or Cotes, as thus, Of the substance
that is taken from Duramater is in-
gendred the first cote that is called Se-
condina: and of Nerui optici is ingen-
dred the third cote that is called Retina:
and eche of them is moze subtiler then
ether, & goeth about the humours with-
out meane. And it is to be vnderstoode,
that eche of these three Tunicles be de-
uided, and so they make sixe; That is to
say,

say, iij. of the partes of the bꝛayne, and
thꝛee of the parts outwarde, and one of
Pericranium that couereth the bones of
the head, whiche is called Coniunctiua.
And thus you maye perceiue the spring-
ing of them : as thus, Of Duramater
springeth Sclerotica and Cornea : of
Diamater springeth Secondina & U-
nia : and of Nerui optici springeth Con-
iunctiua. Nowe to speake of the humours
whiche be thꝛee, and their places are the
middle of the Eyes : Of the whiche the
fyrst is Humor Vitreus, because he is
lyke glasse, in colour very cleare, redde,
liquit, or thinne, and he is in the inward
side next vnto the bꝛayne : and it is thin,
because the nutritiue blood of the Cry-
stalline might passe, as water thꝛough a
sponge should be clenſed and made pure,
and also that the visible spirite mighte
the lightlyer passe thꝛough him from the
Bꝛayne. And he goeth about the Crista-
line humour, vntil he meete with Albu-
ginus humour, which is set in the vtter-
most parte of the Eye. And in the myd-
dest of these humours Vitreus, and Al-
buginus, is set the Crystalline humour,
in whiche is set principally the syght of
the

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the Eye. And these humours be separated and inuolued with the Pannicles as foreshayde, betwene euery Humour a Panicle. And thus is the Eye compound and made. But to speake of euery Humour and euery Pannicle in his due order and course, it would aske a long proceſſe, and a long Chapter, and this is sufficient for a Chirurgion. Nowe to begin at the Noſe: You ſhall vnderſtande that from the Bzayne there commeth, .ij. Senewes to the holes of the bzayne pan, where beginneth the concauitie of the Noſe, and theſe two be not properly ſenewes, but organes or instrumentes of ſmelling, and haue heades lyke teates or pappes, in whiche is receyued the vertue of ſmelling, and repreſenting it to the common wittes.ouer theſe two is ſet Colatorium, that we cal the Noſe thziſ; and it is ſet betweene the Eyes, vnder the vpper parte of the Noſe. And it is to be noted, that this concauitie or ditche was made for two cauſes: The fyrſt is, that the ayre that bzingeth forth the ſpizrite of ſmelling might reſte in it, tyll it were taken of the organ or instrument of ſmelling; The ſeconde cauſe is, that the

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the superfluities of the Brayne might be
hydden vnder it, vntill it were clenſed :
And from his cōcauitie there goeth two
holes down into ymouth, of which there
is to be noted three profites : The fyrſte
is, that when a mans mouth is cloſe, or
when he eateth or ſleepeth, that then the
ayze might come thzough them to the
Lunges, or els a mans mouth ſhould al-
wayes be open : The ſeconde cauſe is,
that they helpe to the relation of the
forme of the Noſe : for it is ſayd, a man
ſpeaketh in his Noſe when any of theſe
holes be ſtopped : The thirde cauſe is,
that the concauitie might be clenſed by
them when a man ſnuffeth the Noſe, or
draweth into his mouth inwardly. The
Noſe is a member conſimple or official,
appearing without the face, ſomewhat
plicable, becauſe it ſhoulde the better be
clenſed. And it is to be perceyued that it
is compounde and made of ſkinne and
Lazartus fleſhe, and of two bones ſtan-
ding in maner trianglewiſe, whole extre-
mities be ioyned in one part of the Noſe
with the Coronal bone, and the nether
extremities are ioyned with two gry-
ſles, and another that diuideth the Noſe
ff.j. thzilles

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thzilles within, and holdeth vp the nose: Also there be two concauities oz holes, that if one were stopped the other should serue: Also there is in the Nose two Muskles, to helpe the working of hys office. And Galen sayth, that the Nose shapeth the face mozte: for where the Nose lacketh (sayth he) al the rest of the face is the moze vnseemely. The Nose should be of a meane bignes, and not to excede in length, oz byeadth, noz in highnesse. For Aristotle sayth, yf the Nose thzills be too thinne, oz to wyde, by great drawing in of ayze, it betokeneth great straightnes of hart, and indignation of thought. And therefore it is to be noted, that the shape of the members of the body, betokneth and iudgeth the affections and wyll of the Soule of man, as the Philosopher sayth. The temples be called the members of the head, and they haue that name because of continuall mouing. And as the science of the Anatomie meaneth, the spirite vital is sente from the hart to the brayne by Arteris, and by veynes and nutrimental blood, where the vessels pulsatiues in the temples be lightly hurt. Also the temples haue

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haue dentes or holes inwardely, wherin
he taketh the humour that cometh from
the brayne, and bringeth the eyes asleepe,
and if the sayde holes or dentes be pres-
sed and wroung, then by trapping of the
humour that continueth, he maketh the
teares to fall from the Eye. The Cheeks
are the sideling partes of the face, and
they conteyne in them Musculus fleshe,
with Veynes and Arteries, and aboute
these partes be many Muscles. Cypdo
maketh mention of. viij. about the chekes
& ouer lyp. And Haly Abbas sayth, there
be. xij. Muscles that moue the nether
Jaw, some of them in opening, and o-
ther some in closing or shutting, passing
vnder the bones of y^e temples, And they
be called Temporales: And they be right
noble and sensatiue, of whose hurte is
muche peril. Also there be other Mus-
cles for to grinde and to chewe. And to
al these Muscles cometh Nerues from
the brayne to geue them feeling and mo-
uing: and also there commeth to them
many Arteries and Veines, and cheefly
about the temples, and the angles or cor-
ners of the Eyes and the Lippes. And
as the Philosophers say, the cheefe beau-

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tie in man is in the cheekes, and there the complexion of man is most knowen, as thus, If they be full, ruddy, and medled with temperate whitnes, and not fat in substaunce, but meanely fleshy, it betokeneth hotte and moyst of complxion, that is, sanguin and temperate in culler. And if they be white coloured, without medling of rednes, and in substaunce fat and soft, quauering, it betokeneth excesse and superfluitie of colde and moyst, that is flematike: And if they be browne in colour, oz cytrin, velowe, redde, and thin, and leane in substance, betokeneth great dyping and heate, that is cholerike: And if they be as it were blowen in colour, and of little fleshe in substaunce, it betokeneth excesse and superfluitie of dypnes and colde, and that is melancolie. And as Auicen sayth, the Cheekes doe not onely shewe the diuersities of complexions, but also the affection and wil of the hart: for by the affection of the hart, by sodaine ioy oz dæde, he waxeth eyther pale oz redde. The bones oz bony partes, fyrste of the cheekes be two: of the Nose outwardely, two: of the vpper Mandibile, two: within the Nose, three: as thus,
one

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one diuiding the Noſethzilles within,
and in ech Noſethzil one, and they ſeeme
to be rowled like a wafer, and haue a
holowneſſe in them, by whiche the ayre
is reſpyzed and drawen to the lunges,
and the ſuperfluitie of the brayne is pur-
ged into the mouthwardes, as is befoze
rehearsed. But Guydo and Galen ſay,
that there be in the face nyne bones, yet
I can not finde that the nether Mandi-
ble ſhould be of ſ number of thoſe nyne,
foz the nether Mandible accompted
there, proueth them to be ten in number,
Of which thing I wyl holde no argu-
ment, but remit it to the ſight of your
Eyes. The partes of the mouth are
fyue, that is to ſay, the Lippes, the teeth,
the toung, the Quila, and the Pallet of
the mouth. And firſt to ſpeake of the lip-
pes, they are members conſimile oz offi-
cial, ful of Muſculus fleſhe, as is afore-
ſayde, and they were ordeyned foz two
cauſes, one is, that they ſhould be to the
mouth as a doze to a houſe, and to keepe
the mouth cloſe tyl the meate were kind-
ly chewed: The other cauſe is, that they
ſhould be helpers to the pronouncing of
the ſpeache. The teeth are members
conſi-

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conſimile oz official, ſpermatike, and hardeſt of any other members, and are faſtened in the cheek bones, and were ordeyned for three cauſes: firſt that they ſhould chewe a many meate, oz it ſhould paſſe downe, that it might be the ſoner digeſted: The ſeconde, that they ſhould be a helpe to the ſpeache, for they that lacke their Teeth doe not perfectly pronounce their wordes: the thirde is, that they ſhould ſerue to beaſts as weapons. The number of them is vncertayne, for ſome men haue mo, and ſome leſſe, they that haue the whole number haue. xxxij. that is to ſay. xvj. aboue, and as many beneath, as thus, two Dvallies, two Quadripulles, two Cannines, eyght Morales, and two Canſales. The Tounge is a carnous member, compounde and made of many Nerues, Lvgamentes, Veines and Arteries, ordeyned principally for three cauſes: The firſt is, that when a man eateth the Tounge mighte helpe to turne the meate tyll it were wel chewed: The ſeconde cauſe is, that by him is receiued the taſte of ſweete and ſowre, and preſented by him to the common wittes: The thirde is, that by him
is

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is pronounced euery speech. The fleshy parte of the toung is white, and hath in him nine muskles, and about the roote of him is Glandulus, in the whiche be two welles, and they be euer ful of spittle to temper and keepe moyst the toung, or els it would waxe dry by reason of his labour. &c. The Uuila is a member made of a spongeous fleshe, hanging downe from the ende of the Pallet ouer the goulet of the throte, and is a member in complexion colde and dry, and oftentimes when there falleth rawnes or muche moystnes into it from the head, then it hangeth downe in the throte, and letteth a man to swallowe, and it is broade at the vpper ende, and smal at the nether. It was ordeyned for diuers causes, One is, that by him is holpen the sounde of speache, for where the Uuila is lacking, there lacketh the perfect sound of speache: Another is, that it mighte helpe the pzolation of vomites: another is, that by him is tempered and abated the distemperaunce of the ayze that passeth to the Lungen: another is, that by him is guyded the superfluities of the bzayne that commeth from the coletures
of

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of the Nose, or els the superfluities should fall down suddenly into the mouth, the which were a displeasure. The Pallet of the mouth conteyneth nothing els but a carnous Pannicle, and the bones that be vnderneath it haue two diuisions, One along the Pallet from the diuision of the Nose, and from the opening of the other Mandible vnto the nether ende of the Pallet, lacking halfe an inch, and there it diuideth ouerthwart, and the first diuision is of the Mandible, and the seconde is of the bone called Maxillarie or Bazillarie, that sustayneth and byndeth al other bones of the head together. The skinne of the Pallet of the mouth is of the inner parte of the stomack and of Myze, and of Plofagus, that is the way of the meate into the stomacke. The way how to know that such a pannicle is of that part of the stomacke, may be knowen when that a man is touched within the mouth, anone he beginneth to tickle in the stomacke, and the neerer that he shal touche vnto the throte, the more it abhorreth the stomocke, and often times it causeth the stomacke to yeld from him that is within him, as when a
man

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man doth vomite. Also in the mouth is ended the vppermoste extremitie of the Uelande, which is ca led Wyze or Esophagus. And with hym is conteyned Trachia arteria, that is, the waye of the ayze, whose holes be couered with a flap like a tong, and is gristly, that the meate and drinke mighte slide ouer him into Esophagus: The whiche gristle when a man speaketh it is reared vp, and couereth the way of the meate: and when a man swalloweth the meate, then it couereth the way of the ayze, so that when the one is couered the other is discovered. For if a man open the waye of the ayze when he swalloweth, if there fall a crum into it, he shal neuer cease coughing vntil it be vp agayne. And this sufficeth for the necke, face.

¶ *Hcereafter foloweth the* Anatomic of the Necke.

THE Necke foloweth next to be spoken of. Galen proueth that the Necke was made for no other cause but for the Lungen, for al thinges that
G. j. that

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that haue no Lungs haue neither necke
noz voyce, except fishe. And you shal vn-
derstande, that the necke is all that is
conteyned betweene the head and the
shoulders, and betweene the chinne and
the brest. It is compounde and made of
foure thinges, that is to say, of Spondil-
lus, of Seruicibus, of Gula, & of Guttur,
the which shal be declared moze playnely
hereafter, and thzough these passe the
waye of the meate and of the ayre, but
they be not of the substance of the necke.
The Spondelles of the necke be seuen,
The fyrst is ioynd vnto the lower parte
of the head, called Maxillarie oz Bazilla-
rie, and in the same wise are ioynd eue-
ry Spondel with other, and the laste of
the seuen with the fyrst of the Backe oz
Kidge: and the Lygamentes that keepe
these Spondels together are not so hard
and tough as those of the backe: for why?
those of the necke be moze feeblen and
subtiller: The cause is this, for it is
necessary otherwhile that the head moue
without the necke, and the necke with-
out the head, the whiche might not well
haue beene done if they had beene strong
and boystrous. Of these aforesayd seuen
Spon:

Spondels of the necke, there springeth
 seuen payze of **Senewes**, the whiche be
 deuided into the head and into the **Wys-**
sage, to the shoulders, and to the armes.
 From the hole of the first spondel sprin-
 geth the fyrst payze of senewes, betwene
 the fyrst spondel and the seconde, and so
 forth of al the rest in like maner as of
 these. Also these senewes receyue subtil
 wylle of the senewes of the **Brayne**, of the
 which wylle, and senewes, and fleshe,
 with a pannikle, make the composition
 of **Muskels**, **Lazartes**, and **Brawnes**,
 the which thzee thinges be al one, and be
 the instrumentes of voluntarie mouing
 of euery member. The **Muskles** of the
 neck after **Galen** are numbyed to be .xx.
 mouing the head and the necke. Like-
 wise it is to be noted, that there be thzee
 maner of fleshes in the necke: the first is
Pixwex or **Seruissis**, and it is called of
Chylde **Golde heire**, or **yellowe heire**,
 the whiche are certayne longitudinales
 lying on the sides of the **Spondels** from
 the head downe to the latter **Spondel**.
 And they are ordeyned for this cause,
 that when the **Senewes** be weery of o-
 uer muche labour with mouing and tra-

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uayle, that they might rest vpon them as vpon a bedde. The second fleshe is musculus, from whome springeth the Tendons and cordes that moue the head and the necke, whiche be numbred twentie, as is afore declared: The thirde fleshe replenisheth the voyde places. &c.

The thirde parte of the necke is called Guttire, and it is the standing out of the Throte boll. The fourth part is called Gula, and the hinder parte Ceruix, and hath that name of the Philosophers because of the marowe comming to the Ridge bones, It is so called, because it is as it were a seruauant to the brayne: For the necke receiueth and taketh of the brayne influence of vertue of mouing, and sendeth it by senewes to other parts of the body downwarde, and to al members of the body. Heere you shal vnderstand, that the way of the meate, & Vire or Esophagus is al one thing, and it is to be noted, that it stretcheth fro the mouth to the stomacke, by the hinder part of the necke inwardly, fastned to the spondels of the necke, vntyl he come to the fyfthe spondel, and there he leaucth the spondel and stretcheth tyl he come to the fourth
most

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most part of the brest, & passeth through
Diafragma tyl it come to the mouth of
the stomacke, and there he is ended. Fur-
thermoze it is to be noted, that this Ue-
sande is compounde and made of two
Tunikles oz Cotes, that is to say, of the
inner, and of the vtter. The vtter tuni-
kle is but simple, for he needeth no re-
tention but onely for his owne nouris-
hing: but the inner Tunikle is com-
pounde and made of Musculus Longi-
tudinal Uyl, by which he may drawe the
meate from the mouth into the stomack,
as it shal be moze playnely declared in
the Anatomie of the stomacke. Further-
moze Cana pulmonis via trachia ar-
teria, al these be one thing, that is to say,
the throte boll, and it is set within the
necke besides y Uesand towards Gula,
and is compounde of the gryfle knytte
eache with other. And that pannikle that
is meane betweene the Uesand and the
throte bol, is called Imon. Also ye shal
vnderstand, that the great Veines which
ramefie by the sydes of the necke to the
vpper part of the head, is of some men
called Gwidege, & of others Vena orga-
nices, the incision of whom is perillous.
And

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And thus it is to be considered, that the Recke of man is compounde and made of skinny fleshe, Ligamentes and bones. And this sufficeth for the necke and the throte.

¶ *The Anatomie of the*

Shoulders and Armes.

AND fyrst to speake of the bones : It is to be noted, that in the shoulder there be two bones, that is to say, the Shoulder bone, and the Cannel bone, and also the adiutor bone of the arme are ioyned with y^e shoulder bones, but they are not numbred among them, but amongst the bones of the armes. In the composition of the shoulder, the fyrst bone is Os spatula, or shoulder blade, whose hinder part is declined towards y^e chinne, & in that ende it is broad & thin, & in the vpper part it is round, in whose roundnes is a cōcauitie, which is called y^e bore or coope of the shoulder, into which entereth the Adiutor bones, and they haue a bynding togethers with strong flexible Senewes, and are conteyned faste with the bone called Clauicula,

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oz the Cannel bone: and this Cannel bone stretcheth to bothe the shoulders, one ende to the one shoulder, and another to the other, and there they make the composition of the shoulders. The bones of the great arme, that is to say, from the shoulder to the fingers endes, be. xxx. The fyrst is the Adiutor bone, whose vpper ende entreteth into the concauitie oz boze of the shoulder bone: It is but one bone hauing no felowe, and it is hollowe and ful of marowe, and it is also crooked because it shoulde be the moze habler to grype thinges, and it is hollowe because it should be lighter and moze obedient to the steering oz mouing of the Brazones. furthermoze, this bone hath two emynences, oz two knobs in his nether extremitie, oz in the iuncture of the Elbowe, of the which the one is moze rising then the other, and are made lyke vnto a Dolly to drawe water with, and the endes of these bones enter into a concauitie proportioned in the vppermoste endes of the two ffocel bones, of whiche two bones the lesse goeth from the Elbowe to the Thombe, by the vppermoste part of the arme, and the greater is the
nether

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nether bone from the Elbowe to the litle finger. And these two bones be con-
teyned with the Adiutor bone, and bee
bounde with strong Ligamentes, and in
like maner with the bones of the hande.
The whiche bones be numbred. viij. the
iiij. vppermost be ioyned with the. iiij. ne-
thermost towarde the handes: and in
the thirde warde of bones, be. v. and they
are called Ossa patinis, and they are in
the palme of the hande. And to them be
ioyned the bones of the fingers and the
Thombes, as thus, in euery fynger. iii.
bones, and in the thombe two bones:
that is to say, in the fingers and thombe
of euery hand. xiiij. called Ossa digitorū,
in the palm of the hand. v. called Patinis,
and betweene the hande and the wyyste
viij. called Racete, and from the wyyst to
the shoulder. iij. bones: al which beeing
accompted together, ye shal finde thirtie
bones in eche hand and arme. To speake
of Senewes, Lygamentes, Cordes and
Veynes: Here fyrst ye shal vnderstand
that there commeth from Mynuca tho-
rowe the Spondels of the necke foure
senewes, which most playnly do appeare
in sight, as thus, one commeth into the
vpper

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Upper parte of the arme, another into the nether parte, and one into the inner side, and another into the vnder side of the arme, and they bring from the brayne and from the Minuca both feeling and moving into the armes, as thus, The senewes that come from the Brayne and from the marrow of the backe that is called Minuca, when they come to the iuncture of the shoulder, there they are mixed with the Lygamentes of the selfe shoulder, and there the Lygamentes receiue both feeling and moving of them, and also in their medling together they are made a Corde or a Tendo. Three causes I find why the senewes were medled with the Lygamentes, The first cause is, that the excellent feeling of the senewes, whiche many waies be made woery by their continual moving, should be repressed by the insensiblenesse of the Lygaments: The seconde is, that the littlenesse of the Senewes shoulde be fulfilled through the quantitie of the Lygaments: The third is, the feebleness of the senewe, that is insufficiente and too feeble to vse his offices, but by the strength and hardnes of the Lygamentes. Nowe to declare
M. J. what

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what a Corde is, what a Ligament, and what a Muskle or a Brazone, it is p: nough rehearsed in the Chapter of the Simple members. But if you wyl thorough the commaundement of the Wyl or of the Soule, drawe the arme to the hinder part of the body, then the vtter Brazone is drawn together, and the inner is enlarged: And likewise inwards, when the one brazone dothe drawe inwards, the other doth stretche, & when the arme is stretched in length, then the Cordes be lengthened: but when they passe the iuncture of the shoulder and of the Elbowe, by three fingers breadth or thereabout, then it is deuided by subtil wyl, and medled with the simple fleshe, and that whiche is made of it is called a Brazone. And three causes I finde why that the simple fleshe is medled with the Corde in the composition of the brazone: The fyrst is, that the aforesayde Wylle might drawe in quiet thzough the temperaunce of the fleshe: The seconde is, that they temper and abate the dzought of the cord with his moistnes, the which dzought he getteth thzough his manifold mouing: The thirde is, that the forme
of

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of the brauwy members shoulde be the
moze fayre, and of better shape: toherfoze
God and nature haue clothed it with a
Banike: that it might the better be kept.
And it is called of y^e Philosophers Mus-
culus, because it hath a forme like vnto a
Muscle. And when these Brauones come
neere a Joynt, then the Cordes spring
forth of them, and are medled with the
Ligaments agayne, and so moueth that
Joynt. And so ye shall vnderstande, that
alwayes betweene euery two Joyntes
is ingendred a Brauone, proportioned to
the same member and place vnto the last
extremitie of the fingers, so that aswell
the least iuncture hath a proper feeling
and mouing when it needeth, as hath
the greatest. And after Guydo there be
numbred. xij. in the arme and hande, as
thus. iij. in the Adiutor, mouing the vp-
per part of the arme: and. iij. in the fo-
rels, mouing that part of the arme: and
fiue in the hande, mouing the syngers.
Now to speake somewhat of the Veynes
and Arteris of the arme: It is to be vn-
derstoode, that from Venakelis there
commeth two braunches, the one com-
meth to the one arme pyt, and the other

¶.ij. com=

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commeth to the other. And now we marke the spreading, for as it is of the one, so it is of the other, as thus, when the braunch is in the arme pnt, there he is deuided into two braunches, the one braunch goeth along in the inner side of the arme vntil it come to the bought of the arme, and there it is called Bazilica or hepatica, and so goeth downe the arme til it come to the wyppst, and there it is turned to the backe of the hand, and is found betweene the little synger and the next, and there it is called Valuatella. Nowe to the other braunch that is in the arme hole, which spreadeth to the vtter side of the shoulder, and there he deuideth in two, y one goeth spreading vp into y carnous parte of the head, and after descendeth throughe the bone into the Brayne, as it is declared in the Anatomie of the head: The other braunch goeth on the outwarde side of the arme, and there he is deuided in two also, the one parte is ended at the hande, and the other part is folded about the arme, tyl it appeare in the bought of the arme, and there it is called Sephalica, from thence it goeth to the backe of the hande, & appeareth betweene the thombe and

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and the foremost fynger, and there it is called Sephalica occularis. The two braunches that I spake of, whiche be deuidd in the hinder part of the shoulders, from eche of these two (I say) springeth one, and those two meete together and make one veyne, which appeareth in the bought of the arme, and there it is called Mediana, or Cordialis, or Commune. And thus it is to be vnderstode, that of vena Sephalica springeth vena occularis, and of vena Bazilica springeth vena Saluatella, and of the two veynes that meete springeth vena Mediana, and in ramesfyng from these fyue principal Veynes springeth innumerable, of the whiche a Chirurgion hath no great charge, for it suffiseth vs to knowe the principals.

To speake of Arteris, you shall vnderstande, that wheresoeuer there is founde a Veyne, there is an Arterie vnder him: and if there be founde a great Veyne, there is founde a great Arterie, and where as is a little Veyne there is a little Arterie: for wheresoeuer there goeth a veyne to geue nutriment, there goeth an Arterie to bring the spirite of lyfe. Wherfore it is to be noted, that the Arteries be

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more deeper in the flesh then the Veines
do: for they carry and kepe in them more
precious blood then doth the Veine, and
therefore he hath neede to be further
from daungers outwardly: and there-
fore God and nature haue ordeyned for
him to be closed in two cotes, where the
Veine hath but one. &c.

The Best of Thorax is the Arke or
Chest of the spiritual members of man,
as sayth the Philosopher, where it is to
be noted, that there be foure thinges con-
teyning, and eyght conteyned, as thus,
The foure conteyning, are, the Skinne,
Musculus fleshe, the Pappes, and the
Bones: The partes conteyned, are, the
Hart, the Lungen, Panikles, Ligamen-
tes, Nerues, Veines, Arteirs, Vire or
Esophagus. Nowe the Skinne and the
fleshe are knowen in their Anatomie. It
is to be noted, that the fleshe of the Pap-
pes differeth from the other fleshe of the
body, for it is white, glandulus, & spon-
geous: and there is in the both Nerues,
Veines and Arteirs, and by them they
haue Coliganes with the hart, the lyuer,
the Brayne, and the generatiue members.
Also there is in the best, as old Authours
make

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make mention, lxxx. or. xi. Muskles, for
some of them be common to the necke,
some to the shoulders, and to the spades,
some to Diafragma or y^e Mydriffe, some
to the Ribbes, some to the Backe, & some
to the brest it selfe. But I fynde certayne
profitableness in the creation of y^e Paps,
aswel in man as in woman: for in man
it defendeth the spirituales from annoy-
annce outwardly: and another, by their
thicknes they comfort the natural heate
in defience of the spirites. And in wo-
men there is the generation of milke: for
in women there commeth from the Ma-
trix into their Brestes manye Veines
which bring into them menstrual blood,
the whiche is turned thzough the dige-
stive vertue from red colour into white,
like the colour of the Pappes, euen as
Chylley comming from the stomocke to
the Lpuer is turned into the colour of
the Lpuer. Nowe to speake of the bones
of the Brest: They be sayde to be triple
or thzeefolde, and they be numbzed to be
seuen in the Brest before, and their
length is according to the bzeadth of the
brest, and their extremities or endes
be grystlie, as the ribbes be. And in the
vpper

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hypper ende of Thozax is an hole or a
concauitie, in which is set the foote of the
Furklebone or Canel bone, and in the
nether ende of Thozax, agaynst y^e mouth
of the stomacke, hangeth a gristle called
Ensiforme: and this gristle was ordey-
ned for two causes, One is, that it shuld
defende the stomacke from hurte out-
wardly: The seconde is, that in time of
fulnes it should geue place to y^e stomacke
in time of neede when it desireth. &c.
Now to speake of the partes of the backe
behindesforth: There be. xij. Spondels,
thzough whom passeth Mynuca, of who
springeth. xij. payze of Nerues, bynging
both feeling and mouing to the Muscles
of the Brest aforesayde. And here it is to
be noted, that in euery syde there be. xij.
Rybbes, that is to say. vij. true, and. v.
false, because these. v. be not so long as
the other. vij. be, and therefore be called
false Rybbes, as it may be perceiued by
the sighte of the Eye. Like wise of the
partes that be inwardly, and fyrst of the
Hart, because he is the pzincipal of al o-
ther members, and the beginning of life:
he is set in the midst of the brest seue-
rally by him selfe, as Lord and King of
al

al members. And as a Lorde or King ought to be serued of his subiectes that haue their liuing of him: So are al other members of the body subiectes to the Hart, for they receyue their liuing of him, and they doo seruice many wayes vnto him agayne. The substance of the Hart is as it were Lazartus fleshe, but it is spermatike, and an official member, and the beginning of life, and he geueth to euery member of the body both blood of life, and spirite of breath and heate: for if the Hart were of Lazartus fleshe, his mouing and steering should be voluntarie and not natural, but the contrarie is true, for it were impossible that the Hart should be ruled by Wyl onely, and not by nature. The Harte hath the shape and forme of a Pyneapple, and the broad ende thereof is vpwordes, and the sharpe ende is downewordes, depending a little towarde the left side. And here it is to be noted, that the Hart hath blood in his substance, whereas al other members haue it but in their Veines & Arteries: also the hart is bounde with certayne Ligamentes to the backpart of the brest, but these Lygamentes touche

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not the substance of the Hart, but in the ouerpart they spring forth of him, and is fastened, as is aforesayde. Furthermore the Hart hath two Ventricks or concauities, and the left is hyer then the right, and the cause of this holownesse is this, for to keepe the blood for his nourishing, and the ayre to abate and temper the great heate that he is in, the which is kept in his concauities. Nowe here it is to be noted, that to the right Ventricle of the harte commeth a veyne from the great veyne called Venakelis, that receyueth al the substance of the blood from the Luer. And this veine that commeth fro venakelis entreteth into the hart at the right Ventricle, as I sayde befoze, and in him is brought a great portion of the thickest blood to nourishe the Hart with, & the residue that is left of this, is made subtil thzough the vertue of the hart, and then this blood is sent into a concauitie or pytte in the myddest of the Harte betweene the two Ventricks, and therein it is made hote and pured, and then it passeth into the left Ventricle, and there is ingendzed in it a spirit that is clearer, bryghter, and subtiler then any corporall

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or bodely thing that is ingendred of the
four Elementes: for it is a thing that
is a meane betweene the body and the
soule. Wherefore it is likened of the Phi-
losophers, to be more liker heauely thin-
ges then earthly thinges. Also it is to be
noted, that from the left Ventricle of the
Hart springeth two Arteries: The one
hauing but one cote, and therefore it is
called Arterea venalis: and this Arter
carieth blood fro the Hart to the Lungs,
the which blood is vapoꝝous, that is tried
and left of the Harte, and is brought by
this Artery to the Lungs to geue hym
nutriment: and there he recepueth of the
Lungs ayre, and bringeth it to the hart
to refreshe him with. Wherefore Galen
sayth, that he fyndeth that mans harte is
natural and frendly to the Lungs, for he
geueth him of his owne nutrimental to
nourishe him with, and the Lungs re-
warde him with ayre to refreshe him
with agayne. &c. The other Arterye
that hath two cotes, is called vena Arte-
riallis, or the great Artery that ascendeth
and descendeth, and of him springeth al
the other Arteries that spreade to euery
member of the body, for by him is vnified

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and quickneth al the members of the body. For the spirite that is reteyned in them, is the instrument or treasure of al the vertue of the soule. And thus it passeth vntil it come to the Brayne, & there he is turned into a further digestion, and there he taketh another spirite, and so is made animal, and at the Luer nutritional, and at the Testikles generatiue: and thus it is made a spirite of euery kinde, so that he beeing meane of all manner of operations and workings taketh effect. Two causes I fynde why these Arteirs haue two cotes: One is, that one cote is not sufficient nor able to withstande the violent mouing and steering of the spirite of lyfe that is carped in the: The seconde cause is, that the thing that is caried about from place to place, is of so pzeious a treasure that it had the moze neede of good keeping. And of some Doctozs this Arteir is called the Pulsatiue veyne, or the beating veyne: for by him is perceyued the power & might of the Hart, &c. Wherfore God and Nature haue ordeyned that the Arteirs should haue two cotes. Also there is in the Harte three Velikels, opening and closing

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closing the goeing in of the Harte blood
and spirite in conuenient time. Also the
Hart hath two little Eares, by whome
commeth in and passeth out the ayre that
is prepared for the Lungen. Also there
is founde in the Hart a Cartilaginus
auditament, to helpe and strength the
selfe Harte. Also the Harte is couered
with a strong Pannikle, which is called
of some Capsula cordis, or Pericordium,
the which is a strong case, vnto whome
commeth Perues, as to other inwarde
members. And this Pannicle Pericordiū
springeth of the vpper Pannikle of the
Middriffe. And of him springeth another
Pannikle called Mediastinum, the which
departeth the Brest in the middest, and
keepeth that the Lungen fal not ouer the
Hart. Also there is an other Pannikle
that couereth the Ribbes inwardly, that
is called Plura, of whom the Middriffe
taketh his beginning. And it is sayde of
many Doctors, that Duramater is the
originall of all the Pannicles within
the body: and thus one taketh
of another. &c.

¶ The

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¶ *The Anatomie of the*
Lunges.

THE Lunges is a member spermatike of his fyrst creation, and his natural complexion is colde and dry, and in his accidental complexion he is colde and moyste, lapped in a Serueous Mannicle, bicause it should gather togeather the softer substaunce of the Lunges, and that the Lunges might feele by the meanes of the Mannicle, that whiche he mighte not feele in him selfe. Nowe to proue the Lunges to be colde and drye of kinde, it appeareth by hys swift steering, for he lyeth euer wauiing ouer the hart, and about the harte. And that he is colde and moyst in rewarde, it appeareth wel, that he recepueth of the brayne many cold matters, as Cataries, and Rumes, whose substance is thinne. Also I fynde in the Lunges thre kinds of substaunce: One is a Veyne comming from the Liuer, blynging with him the Crude or rawe parte of the Chylle to fede the Lunges: Another is Arterea venalis, comming from the hart, blynging with

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with him the spirite of lyfe to nourishe him with : The thirde is Trachia arteria, that bringeth in ayre to the Lungen, and it passeth through al the left part of them to doo his office. The Lungen is deuided into siue Lobbes or Bellikels, or siue portions, that is to say, thre in the right side, and two in the left side. And it was done for this cause, that if there fel any hurt in the one part, the others shoulde serue and doo their office. And thre causes I finde why the Lungen were principally ordeyned : ffirst, that they should drawe colde winde, and refreshe the hart : The seconde, that they shoulde chaunge and alter, and purifie the ayre before it come to y hart, least the hart were hurte and noyed with the quantitie of the ayre : The thirde cause is, that they shoulde receyue from the harte the fumes superfluities that he putteth forth with hys breathing. &c. Behinde the Lungen toward the Spondels, passeth Vire or Esophagus, of whom it is spoken of in the Anatomie of the necke. And also there passeth both Veynes and Arteries, and al these with Trachia arteria, doo make a Stoke, replete vnto the Gullet with Panni:

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Dannikles, and strong Lygaments, and Glandulus fleshe to fulfil the voyde places. And last of al is the Midge, and it is an official member, made of two Dannikles, and Lazartus flesh, and his place is in the middest of the body, ouerthwart oz in bredth vnder the region of the spirituall members, departing them from the matrix. And thre causes I finde why the Midge was ordeyned: first, that it should diuide the spirituals from the nutrates: The seconde, that it should keepe the vital colour oz heate to dissende downe to the nutrates: The last is, that the malicious fumes reared vp from the nutrates, should not noye the spirituals oz bytals. &c.

The wombe is the region oz the citie of al the Intrils, the whiche reacheth from the Midge downe vnto the shere inwardly, and outwardly from the Keynes oz Kydnes, downe to the bone Pecten, about the priuie partes. And thys wombe is compounde and made of two thinges, that is to say, of Syfac & Myrac. Syfac is a Dauncle, and a member spersmatike, official, sensible, senowpy, compoud of subtil Myl, and in complexion colde and

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and dyce, hauing his beginning at the inner Pannicle of the Midriffe. And it was ordeyned because it shoulde con-
teyne and bind together al the Intrals,
and that he defende the Musculus so
that he oppresse not the natural mem-
bers. And that he is strong and tough,
it is because he should not be lightly bro-
ken, and that those thinges that are con-
teyned goo not forth, as it happeneth to
them that are broken. cc. Myrac is co:
pound and made of foure things, that is,
of skin outwardly, of fatnes, of a carnous
pannicle, and of Musculus fleshe. And
that it is to be vnderstanded, that all the
whole from Sifac outwarde is called
Myrac, it appeareth wel by the wordes
of Galen, where he commaundeth, that
in al woundes of the wombe to sewe the
Sifac with the Myrac, and by that it
proueth that there is nothing without
the Sifac but Myrac. And in this My-
rac or vtter parte of the wombe, there is
noted eyght Muscles, two Longitudi-
nals, proceeding from the sheelde of the
Stomacke vnto Os Pecten: two La-
titudinales comming from the backe
wardes to the wombe: and foure Tran-

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uerse, of the which two of them spring from the Ribbes on the right side, and go to the left side, to the bones of the Haunches, or of Pecten: and the other two spring from the Ribbes on the left syde, and come ouer the wombe to the righte partes, as the other befoze doth. Heere it is to be noted, that by the vertue of the subtyl wyl that is in the Musculus longitudinal, is made perfect the vertue attractiue: and by the musculus Transuerse is made the vertue retentiue: and by the musculus Latitudinale is made the vertue expulsiue. It is thus to be vnderstoode, that by the vertue attractiue is drawen downe into the Intrals al superfluities, both water, wynde, and dyrt: By the vertue retentiue all thinges are withholden and kept, vntil nature haue wrought his kinde: And by the vertue expulsiue is put forth al thinges, when Nature prouoketh any thing to be done. Galen sayth, that woundes or incisions be moze perillous in the middest of the wombe then about the sides, for there the partes be moze tractable, then any other partes be. Also he sayth, that in woundes persing the womb there shal not be made
good

good incarnation, except Sifac be sewed
with Myrac. Nowe to come to y parts
conternyed within: fyrst, that which ap-
peareth next vnder the Sifac is Omen-
tum, or Zirbus, the which is a pannicle
couering the stomacke and the Intrals,
implated with many Veynes & Arteries,
and not a little fatnes ordeyned to keepe
moyst the inwarde partes. This Zirbus
is an official member, and is compound
of a veyne and an Arter, the which en-
treth and maketh a line of the vtter tuni-
kle of the stomacke, vnto whiche tunikle
hangeth the Zirbus, and couereth al the
guttess downe to the Mayze. Two causes
I finde why they were ordeyned: one is
that they shuld defend y nutritiues out-
wardly: the seconde is, that thzough his
owne power & vertue he should strength
& cōfort the digestion of al the Nutrates,
because they are moze feibler then other
members be, bicause they haue but a thin
wombe or skinne. &c. Next Zirbus ap-
peareth the Intrals or guttes, of which
Galen saith, that the Guttes were orde-
ned in the fyrst creation to conuey the
drosse of the meate and drinke, & to cleanse
the body of their superfluities. And here
it is to be noted that there be sixe portions

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of one whole Gutte, which both in man and beast beginneth at the nether mouth of the stomacke, and so continueth forth to the end of the fundament. Ne uertheless he hath diuers shapes and formes, and diuers operations in the body, and therefore he hath diuers names. And here vpon the Philosophers say, that y^e lower wombe of a man is like vnto the wombe of a swine. And lyke as the stomack hath two tunikles, in like maner haue al the Gutes two tunikles. The fyrst portion of the Gutes is called Duodenum, for he is. xij. ynches of length, and couereth the nether parte of the stomacke, and recepueth al the drosse of y^e stomacke: The seconde portion of the Gutes is called Ieiunium, for he is euermore emptie, for to him lyeth euermore the chiefe of the Gal, beating him sore, and draweth forth of him al the drosse, & clenseth him clene: The iij. portion of gutte is called Yleon, or smal gutte, and is in length. xv. or. xviij. Cubites. In this gutte oftentimes falleth a disease called Yleaca passio. The iiij. gut is called Monoculus, or blind gut, and it seemeth to haue but one hole or mouth, but it hath two, one neere vnto the other, for by the one al thinges go in, and

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and by the other they goo out agayne:
The fyrst is called Colon, and recepueth
al the droffe depriued from al profitable-
nesse, and therefore there commeth not to
him any veynes Miserables, as to the o-
ther: The syxte & last is called Rectum,
or Lōgaon, and he is ended in the Fun-
dament, and hath in his nether end foure
Muscles, to holde, to open, to shutte, and
to put out. &c. Next is to be noted of
Mesenterium, the which is nothing else
but a texture of innumerable veynes
Miserables, ramesied of one veyne called
Porta epates, couered and defended of
Mannicles and Ligamentes comming to
the Intrals, with the backe ful of fatnes
and glandulus fleshe. &c.

The stomacke is a member compound
and spermatike, senowye and sensible, and
therein is made perfect the fyrst digestion
of Chyle. This is a necessarie member
to al the body, for if it faile in his wor-
king, al the members of the body shal cor-
rupte. Wherefore Galen sayth, that the
stomacke was ordeyned principally for
two causes: The first, that it shoulde be
to al the members of the body, as y^e earth
is to al that are ingendzed of the earth,
that is, that it shoulde desire sufficient
meate

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meate for al the whole body: The seconde is, that the stomacke shoulde be a sacke or chest to al the bodie for y meate, and as a Cooke to al the members of the body. The stomacke is made of two pannicles, of which the inner is Nerueous, and the vtter Carneous. This inner pannicle hath musculus longitudinales that stretcheth along from the stomacke to the mouth, by the which he draweth to him meate and drinke, as it were handes. Also he hath Tranuers wyl, for to withhold or make retention. And also the vtter pannicle hath Latitudinal wyl, to expulse and put out: and that by his heate he shoulde helpe the digestiue vertue of the Stomacke, and by other heates geuen by his neighbours, as thus, It hath the lyuer on the right side, chafing & heating him with his lobes or figures: & the Splen on the left syde with his fatnes, & beynes sending to him melancolie, to exercise his appetites: and aboue him is the Harte, quickening him with his Arteries: Also the Brayne, sending to him a braynche of Nerves to geue him feeling. And he hath on the hinder parte, dissendig of the partes of the backe many Lygamentes, with the which he is bounde

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bounde to the Spondels of the backe. The forme or fygure of the Stomacke is long, in likenes of a gowde, crooked: and that both holes be in the vpper part of the body of it, is, because there should be no going out of it vnaduisedly of those thinges that are receyued into it. The quantitie of the stomacke commonly holdeth two pitchers of water, and it maye suffer many passions, and the nether mouth of the stomacke is narrower then the vpper, and that for thzee causes: the first cause is, that the vpper receyueth meate great and boystrous in substaunce that there beeyng made subtile it might passe into the nether: The second is, for by him passeth al the meates, with their chilositie from the Stomacke to the Lyuer: The thirde is, for that thzough him passeth al the drosse of the Stomacke to the guttes. And this suffiseth for the Stomacke. &c.

The Lyuer is a principlal member, and official, and of his first creation spermatike, complete in quantitie of blood, of him self insencible, but by accidence he is sencible, and in him is made the seconde digestion, and is lapped in a Senowyp pannicle. And that he is a principlal mem=

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member, it appeareth openly by the Philosophers, by Auicen, and Galen. And it is official as is the stomacke, and it is of spermatike matter, and senow, of the which is ingendred his Veynes. And because it was little in quantitie, nature hath added to it cruded blood, to the accomplishment of sufficient quantity, and is lapped in a senow pannicle. And why the Lpuer is cruded, is, because y^e Chyle which commeth from the stomacke to the Lpuer, should be turned into the colour of blood. And why the Lpuer was ordeined, was, because that al the nutrimental blood shoulde be ingendred in him. The proper place of the Lpuer is vnder the false Ribbes in the righte side. The forme of the lpuer is gibbous or bunchy on the backside, & it is somewhat hollow like the insyde of an hande. And why it is so shapen, is, that it should be plicable to the stomacke, like as a hande dothe to an apple, to comforte her digestion, for his heate is to the stomacke as the heate of the fyre is to the Potte or Cauldron that hangeth ouer it. Also the Lpuer is bounde with his pellickes to the Diafragma, and with strong Lygamentes. And also he hath Colyganex with the
Sto:

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Stomack and the Intrals, and with the Hart and the Raines, the Testicles and other members. And there are in hym five Pellikles like five fingers. Galen calleth the Liuer Massasanguinaria, conteyning in it selfe foure substances, Natural and Nutritional. The naturals is sent with the blood to all partes of the body to be ingendred and nourished. And the nutrimentals be sequestrate and sent to places ordeyned for some helpinges. These are the places of the humors, the blood in the Lyuer, Choler in the chest of gal, Melancolie to the Splen, flegme to the Lungen and the Junctures, the watery superfluities to the Keynes and the Vesike. And they goo with y blood, and sometime they putrifie and make feuers, and some be put out to the skin, and be resolved by sweat, or by skab, by Pusshes, or by Impostumes. And these foure natural humours, that is to say, Sanguin, Choler, Melancoly, & flegme, be ingendred and distributed in this manner: first ye shal vnderstande that from the Spermatike matter of the Liuer inwardly, there is ingendred two greate veynes, of the whiche the first and the greatest is called Porta, and commeth

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from the concauitie of the *Lyu*er, of wh^{ch} springeth al the smal *vey*nes *Miseraices*, and these *Miseraices* be to *Vena porta* as the *bzaunches* of a tree be to the stocke o^r tree. *f*o^r some of them be conteyned with the botome of the stomacke, some wyth *Duodenum*, some with *Ieiunium*, some with *Yleon*, & some with *Monoculus*, o^r *Saccus*. And from al these guttes they bzing to *Vena porta* the succozitie of *Chiley* goeing from the stomacke, & distribute it into the substaunce of the *Lyu*er. And these *vey*nes *Miseraices* be innumerable. And in these *bay*nes is begon the seconde digestion, and ended in the *Lyu*er, like as is in the Stomacke the fyrst digestion. So it proueth that *Vena porta* and *vena Miseraices* serue to bzing al the succozitie of the meate and drinke that passeth the Stomacke to the *Liu*er, and they spreade them selues thorough the substaunce of the *Liu*er inwardly, and al they stretch towards the gibbos o^r bowing part of the *Liu*er, and there they meete and goe al into one vni^{ti}tie, & make the second great veine called *Venakelis* o^r *Concaua*, o^r *Vena ramosa*, al is one, and he with his rootes dra^weth out

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out al the blood ingendzed from the L^yuer, and with his bzaunches ramefying bpwardes and downewardes, carieth and conuerpeth it to al other members of the body to be nourished with, where is made perfect the thirde digestion. And also there goeth from the L^yuer veines bearing the superfluities of the thirde digestion to their proper places, as it shal be declared hereafter.

Nowe to speake of the Gal, or the chest of the Gal: it is an official member, and it is spermatike and senowpy, and hath in it a subtil wyl, and it is as a purse or a pannicular vessike in the holownesse of the L^yuer, about the middle pericle or lobe, ordeyned to receyue the Cholerike superfluities which are ingendzed in the L^yuer. The which purse or bagge hath thzee holes or neckes: by the fyrste he draweth to him from the L^yuer the choler, that the blood be not hurt by the choler: by the seconde necke he sendeth to the bottome of the stomacke Choler to further the digestion of the stomacke: And by the third neck he sendeth the choler regularly from one gutte to another to clesse them of their superfluities and drosse: and the quantitie of the purse may

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conteyne in it halfe a pinte. &c.

And next is the Splen, or the Milte, the whiche is a spermatike member, as are other members, and official, and is the receptory of the melancolious superfluities that are ingendzed in the Liuer. And his place is on the lefte side, transuersely lincked to the stomacke, and his substance is thinne. And two causes I finde why he was ordeyned there: The first is, that by the melancolious superfluities that are ingendzed of the Lyuer which he draweth to him, he is nourished with: The seconde cause is, that the nutritiue blood should by him be made the more purer and cleane, from the grosse and thickening of melancolie. &c.

And next of the Keynes and Kidnes: It is to be vnderstoode, that within the region of the Nutrites backwardes, are ordeyned the Kidnes, to cleanse the blood from the waterie superfluities, And they haue ech of them two passages, or holes, or neckes: by the one is drawen the water from Menakelis by two veynes, whiche are called vena emulgentes, the length of a fynger of a man, and issueth from the Liuer: and by the other is sente the same water to the Bladder, and is called Poros

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Poros vrithides. The substance of the Kidnes is Lazartus fleshe, hauing Longitudinal wyl. And their place is behinde on eache side of the Spondles, and they are two in number, and the righte Kidney lyeth somewhat hyper then the lefte, and is bounde fast to the backe with Lygamentes. The Philosopher sayth, that mans kidneys are like to the kidnes of a Cowe, ful of harde knottes, hauing in him many harde concauities, and therefore the sores of them be harde to cure. Also they are more harder in substance then any other fleshy member, and that for two causes: one is, that he bee not muche hurt of the sharpnesse of the vrin: The other is, that the same vrin that passeth from him might the better be altered and clensted throughe the same. Also there commeth from the harte to eche of the kydnes an Arter, that bringeth with him blood, heate, spirite, and lyfe. And in the same maner there commeth a veyne from the Lyuer, that bringeth blood to nourishe the kydnes, called blood nutrimental. The grease of these kydnes or fatnes is as of other inwarde members, but it is an official member, made of thinne blood, congeled & cruded through

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thzough colde : and there is ordeyned the greater quantitie in his place, because it should receyue and temper the heate of the kydnes, which they haue of the byrting sharpnesse of the water. Nowe by the kydnes vpon the Spondels passeth Venakelis, or venacaua, which is a veyne of a great substaunce, for he receyueth al the nutrimental blood from the Luer: and from him passeth many smal pyppes on euery side, and at the Spondel betwene the Shoulders he deuideth him selfe whole into two great bzaunches, the one goeth into the one arme, and the other into the other, and there they deuide them selues into many veynes and bzaunches: as it is declared in the armes.

The Anatomie of the Hanches, and their parts.

The Hanches are the lower parte of the wombe, ioyning to the Thies, and the secret members. And thzee thinges there are to be noted thereof: the first is of the partes containing: the seconde is of the partes conseryued: and the thirde is of the partes

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proceeding outwardeſ. The partes con-
teynning outwardly, be Myrac and Sifac,
the Zirbus, and the bones. The partes
conteynned inwardly, are, the Vezike, or
bladder, the ſpermatike veſſels, the Ma-
trix in women, Longaon, Nerues, Vey-
nes, and Arteries diſſending downwards
The partes proceeding outwardeſ, are,
The Buttockeſ, and the Muſcles diſ-
ſending to the Thies, of whiche it is
to be ſpoken of in order. And firſt of the
partes conteynning: as of Myrac, Sifac,
and Zirbus, there is ynough ſpoken of in
the Anatomie of the wombe. But as for
the bones of the Hanches, There be of
the partes of the backe thre Spondels
of Oſſa ſacri, or of the Hanches, & thre
cartilaginis ſpondels of Oſſa caude, cal-
led, The tayle bonne. And thus it is pro-
ued, that there is in euery man, woman,
and childe. xxx. ſpondels, and thus they
are to be numbred: In the Necke, vii. in
the Ridge, xii. in the Keyneſ, v. & in the
Hanches, vi. And it is to be noted, that
euery ſpondel is hollowe in the middeſt,
through which holowneſſe paſſeth Rura
from the Brayne, or the marowe of the
backe. And ſome Authoꝝ ſay, that My-
nuca is of the ſame ſubſtaunce that the
Brayne

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Braine is of, for it is like in substance,
and in it selfe geueth to the Nerves both
the vertue of mouing and feeling. And
also euery Spondel is holed on euery
side, through the which holes both Ar-
teirs and veynes, doo bring from the
hart and the Luer both lyfe & nourish-
ment, like as they doo to the brayne: and
from the pannicle of Myelina or the mar-
rowe of the backe, through the holes of
the sides of the spondels, springeth forth
Nerves motiues, and there they inter-
medle them selues with the strong Ly-
gamentes that be insensible, and so the
Lygamentes receyue that feeling of the
Nerve, which the Nerve taketh of My-
elina. And by this reason many Auctors
proue, that Myelina is of the same sub-
stance that the Brayne is of, and the
panicles of the Myelina is of the substance
of the pannicles of the Brayne. &c. And
eche of these spondels be bounde fast one
with another, so that one of them maye
not wel be moued without another. And
so al these spöddles together, cōteined one
by another are called y Kidgbone, which
is the fundation of al the shape of the bo-
dy. They with the laste spondel be con-
teyned or ioyned to the bones of the
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Hanches, and they be the vpholders of al the spondles. And these bones be smal towardes the tayle bone, and boade towardes the Hanches, and befoze they ioyne and make Os pectinis. And so they be boode in the partes of the Iles, and therefore some Authoꝝ calleth it Ilea. And ech of these two bones toward the lyuer hath a great rounde hole, into the whiche is receyued the bone called Vertebra, or, The whozle bone, Also besides that place there is a great hole or way, thzough the which passeth frō aboue Musculus, beyne, and Arteirs, and go into the Chees. And thus it is to be noted, that of this bone Pecten, and the bone Vertebra, is made the iuncture of the Thye.

Now to speake of the parts conteyned, The first thing that commeth to sight, is the Bladder, the which is an official member, compoude of two Neruous Duanicles, in complexion colde & dry, whose necke is carnous, and hath Muscles to withholde, and to let go: And in men it is long, and is conteyned with the yard, passing thzough Peritoneum, but in women it is shorter, and is conteyned within the Vulua. The place of the bladder is
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betweene the bone of the Share and the
tayle gutte called Longaon, and in wo-
men it is betweene the foresayde Bone
and the Matrix. And in it is implanted
two long Vessels comming from the
kidnes, whose names be Porri vrichides,
byrning with them the Urin oz water
from the kidnes to the bladder, whiche
pziuily entreth into the holes of the pan-
nicles of the bladder, by a natural mo-
uing betweene tunicle and tunicle, and
there the vzin fyndeth the hole of the ne-
ther tunikle, and there it entreth pziuily
into the concauitie of the bladder, and the
more that the bladder is filled with vzin,
the straighter be the two tunicles com-
piled together, for the holes of the tu-
nicles be not euen one agaynst another,
and therefore if the bladder be neuer so
ful, there may none goe backe agayne.
The forme of it is rounde, the quantitie
of it is a pitcher full, in some more, and
in some lesse. &c. Also there is founde
two other vessels called, vaza seminaria,
oz the spermatike vessels. And they come
from Uenakellis, byrning blood to the
Testikles, as wel in man, as in woman,
in the which by his further digestion it
is made sparme oz nature in men. They
be

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be put outwarde, for the Testicles be without, but in women it abydeth within, for their Testicles stande within, as it shal be declared hereafter.

Next foloweth the Matrix in women: The Matrix in woman is an official member, compounde and Heruicous, and in complexion colde and dry. And it is the selde of mans generation, and it is an instrument susceptible, that is to say, a thing receyuing or taking: and her proper place is betwene the bladder and the gutte Longaon, the likenes of it is as it were a pade reuerfed or turned inward: hauing testicles likewise, as aforesaid: As the Matrix hath two concavities or selles, and no more, but all beastes haue as many selles as they haue pappes heades. Also it hath a long necke lyke an bynal, & in euery necke it hath a mouth, that is to saye, one within, and an other without. The inner in the tyme of conception is shutte, and the vtter parte is open, as it was befoze: and it hath in the middest a Lazartus pannicle, whiche is called in Laten Tentigo. And in the creation of this Pannicle is founde two vtilities: The first is, that by it goeth forth the vrin, or els it should be shed through:

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out al the Vulua: The seconde is, that when a woman doth set hir thies abrode it altereth the ayze that commeth to the Matrix for to temper the heat. Furthermore, the necke that is betweene these two foresayde mouthes, in her concauitie hath many inuolutions and pleates, ioyned together in the maner of Rose leaues before they be fully spread or ripe, and so they be shut togeather as a Purse mouth, so that nothing may passe forth but vzin, vntil the time of chylding. Also about the middle of this necke be certain veynes in Maydens, the which in tyme of deflouring be corrupt & broken. Furthermore, in the sides of the vtter mouth of the mouth are two testicles or stones, and also two vessels of sparme shorter then mans vessels, and in time of coyt the womans sperme is shed downe into the bottome of the Matrix. Also from the Pyuer there commeth to the Matrix many veynes, bzinging to the childe nourishing at the time of a womans beeing with childe: and those veynes, at suche time as the Matrix is voyde, bzing thereto superfluities from certayne members of the body, whereof are ingendred womens flowes, &c.

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And forasmuche as it hath pleased almightie God to geue the knowledge of these his mysteries and workes vnto his Creatures in this present worlde, Here I purpose to declare what thing Embreon is, and his creation. The noble Philosophers, as Galen, Auicen, Bartholomeus, and diuers other writing vpon this matter, say, That Embreon is a thing ingendred in the mothers wombe, the original wherof is y^e sparme of the man and the woman, of the which is made by the might and power of God, in the mothers wombe a chylde, as hereafter moze at large shal be declared. First the feede of generation called the Matrix, or the mother, is known in the anatomie, whose place is properly betwixt the Bladder and Longaon in the womā, in which place is sown by the tillage of man a couenable matter of kindly heate, for kindly heate is cause efficeens both of dooing and working, and spirite that geueth vertue to the body, and gouerneth and ruleth that vertue: the which seed of generation commeth from al the partes of the body both of the man and the woman, with consent & wyl of al members, and is shed into the place of conceyuing,

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uing, where through the vertue of Nature it is gathered together in the selles of the matrix or the mother, in whom by the way of the working of mans seede, and by the way of suffering of the womans seede mixt together, so that eche of them worketh in other, and suffereth in other, there is ingendred Embzeen. And further it is to be noted, that this sparme that commeth both of man and woman, is made & gathered of the most best and purest dzops of blood in all the body, and by the labour and chafing of the testikles or stones this blood is turned into another kinde, and is made sparme. And in man it is hott, white, & thicke, wherfoze it may not spread nor runne abroad of it selfe, but runneth and taketh temperaunce of the womans sparme, which hath contrarie qualities, for the womans sparme is thinner, colder, and feebler. And as some Authozs holde opinion, when this matter is gathered into the right side of the matrix, then it hap- peneth a male kinde, and likewise on the lefte the female, and where the vertue is most, there it sauoureth most. And further it is to be noted, that lyke as the Renet of the Cheeſe hath by him selfe the way

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waye of vertue of working, so hath the mylke by waye of suffering: and as the Renet and mylke make the chéeſe, ſo doth the ſparme of man and woman make the generation of Embzeon, of the which thing ſpringeth by the vertue of kindly heate, a certayne ſkinne or caule, into the which it lappeth it ſelfe in, wherewith afterwardeſ it is tyed to the mothers wombe, the which couering commeth forth with the byrth of the childe, and if it happen that any of the ſkinne remaine after the byrth of the childe, then is the woman in peril of her lyfe. Furthermore it is ſayde, that of this Embzeon is ingendred the Hart, the Lyuer, the Brayne Nerues, veynes, Arteris, Cordes, Lymphagamentes, Skinnes, Gristles, & Bones, receyuing to them by kindly vertue the menſtrual blood, of which is ingendred both fleſhe and fatneſſe. And as wyters ſay, the fyrſt thing that is ſhapen be the principals, as is the Harte, Lyuer, and Brayne. For of the Hart ſpringeth the Arteris, of the Lyuer the Veynes, and of the Brayne the Nerues: and when theſe are made, Nature maketh & ſhapeth Bones and gryſtles to keepe & ſaue them, as the bones of the head for the
Brayne,

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Brayne, the Best bones and the Ribbes
for the Harte and the Luer. And after
these springeth al other member one af-
ter another. And thus is the childe bred
forth in four degrees, as thus, The first
is, when the sayde sparne oz seede is at
the fyrst as it were mylke : The seconde
is, when it is turned from that kinde in-
to another kinde, is yet but as a lumpe
of blood, and this is called of Ppocras,
Fettus : The thirde degree is, when the
principals be shapen, as the Hart, luer,
and Brayne : The fourth and laste, as
when al the other members be perfectly
shapen, then it receyueth the soule wyth
life and breath, and then it beginneth to
moue it selfe alone. Nowe in these foure
degrees aforesayde, in the fyrst as milke
it continueth, viij. dayes : in the seconde
as Fettus, ix. dayes : in the thirde as a
lumpe of fleshe ingendring the princi-
pals the space of, ix. days : and the fourth
vnto the tyme of ful perfection of al the
whole members, is the space of, xviij.
dayes : So is there, xlvj. dayes from the
day of conception vnto the day of ful per-
fection and receyuing of the soule, as
God best knoweth.

Now to come agayne to the Anatomie
of

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of the Vanches: Then come we to Longaon, otherwise called, The tayle gutte, whose substance is panniculer, as of al the other bowels, the length of it is of a spanne long, stretching nigh to the Raynes, his nether parte is called Annis, that is to say, The towel. And about him is found two Muscles, the one to open, the other to shutte. Also there is founde in him fiue veynes or bzaunches of veynes, called vena emoraidales, and they haue coliganes with the bladder, wherefoze they are partners in their greecues. And when this Longaon is rayled vp, then ye may see the veynes and arteirs, and senowes, howe they be bzaunched and bounde downe to the nether partes. The partes proceeding outwardly, are, Didimus, Peritoneum, the Parde, the Testikles, and the Buttockes. And fyrst it shal be spoken of the yarde, or of mans generatiue members, the whiche dureth vnto that parte that is called Peritoneum, the which place is from the Coddes vnto the Fundament, whereupon is a seame. Wherfoze sayth the Philosopher, Mans yarde is in the ende and terme of the share. The yarde is an official mem-
ber,

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ber, and the tyller of mans generation, compounde and made of skinne, brawnes, Tendons, veynes, arteirs, senewes, and great Lymaments: and it hath in it two passages, or principal issues, that is to say, one for the sparne, and another for the vryn. And as the Philosophers say, the quantitie of a common yarde is viij. or ix. ynches, with mesurable bignes proportioned to the quantitie of the matrix. This member hath, as sayth Auisen, three holes, through one passeth incensibile polissions and wynde, that causeth the yarde to ryle: the other two holes be declared befoze. Also the yarde hath a skinne, and about the head thereof it is double, and that men call Prepusium, and this skinne is mouable, for through his consecration the spermatike matter is the better and sooner gathered together, and sooner cast forth from the Testicles: for by him is had the moze delectation in the doing. And the foremost part of the head of the yarde befoze is made of a subtil brawny fleshe, the whiche if it be once lost, it is neuer restozed agayne, but it may wel be skinned. &c.

The Coddex is a compounde member,

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ber, and an official, and though it be counted amongst the generatiue members, yet it is called a principal member because of generation. This purse was ordeined for the custodie & comfort of the testikles and other spermatike vessels. And it is also made of two partes, of the inner, and the vtter. The vtter is compound and made of skynne, and lazartus, longitudinal, and transuersal, in like manner as is the Myrac. The inner parte of the Coddes is of the substance of the Sifac, and are in similitude as two pockets drawen together by them selues, and they differ not from the Sifac: and there be two, because if there fall any hurt to the one, the other should serue. The Testikles or stones be two, made of gladius fleshe or curnelly fleshe. And furthermore, through the Didimus cometh to the Testikles from the Vayne, Senowes, and from the Hart Arteries, and from the Luer veynes, bringing vnto them both feeding and steering, lyfe and spirite, and nutrimental blood, and the most purest blood of al other members of the body, wherof is made the sparme by the labour of the Testicles, the which is
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put forth in due tyme, as is before rehearsed.

The Groynes be knowen: they be the empy iunctures oz purging place vnto the Lyuer, and they haue curnelly fleshe in the plying oz bowing of the Thyres.

The Hippes haue great brawny fleshe on them, and from thence dissende downwards brawnes, cordes, and lygaments, mouing and bynding together the thyres, with the Haunches themselues.

The Anatomie of the Thyes, Legges, and Feete.

THE Legge reacheth from the Ioynt of the Thie vnto the extremitie of the Toes, and I wyl deuide it in partes, as the armes were deuided: One parte is called Coxa, oz Thigh, and that is al that is conteyned from the ioynt of the Haunche vnto the Knee: The seconde part is called Tibia, and that reacheth from the Knee to the Ankle: The thirde is the little foote, and that is from the Ankle, vnto the end of the Toes. And here it is to be noted, that

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that the Thigh, Legge, and ffoote, are
compounde and made as the great arme
or hande, with skinne, fleshe, veynes, ar-
teirs, senewes, braynes, tendons, and
bones, whercof they are to be spoken of
in order. Of the skinne and fleshe there
is ynough spoken of before. And as of
veynes and arteirs, in their descending
downewardes at the laste spondels they
be deuided into two partes, whercof the
one parte goeth into the right Thye, and
the other into the lefte: and when they
come to the Thye they be deuided into
other two great braunches: the one of
them spreaddeth into the inner side of the
Legge, and the other spreaddeth into the
vtter syde, and so braunching dissende
downe the Legge to the ankles & fete,
and be brought into foure veynes, which
be commonly vled in letting blood, as
hereafter foloweth. One of them is vn-
der the inner ankle towarde the heele,
called Soffena, and another vnder the vt-
ter ankle, called Siattica, and another
vnder the hamme, called Poplitica, the
fourth betweene the little Toe and the
next, called Kenalis. And it is to be noted
of these foure great veynes in the legges
of the manyfolde daungers that mighte
fal

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fal of them, as oft it happeneth. There be many other braunches which a Chirurgeon nedeth not much to passe vpon. The Sencwes spring of the last spondel, & of Os sacrum, and passeth thzough the hole of the bone of the Hippe, and dissendeth to the Bzawnes, and moueth the Kneē & the ham, and these dissende downe to the ankle, and moue the foote, and the bzawnes of the feete moue the Toes, in lyke maner as is declared in the bones of the handes. The first is called Coxa, that is The thye bone, and he is without a fel: lowe, and is ful of marow, and is round at eyther ende: The roundnes that is at the vpper ende is called Vertebra, or Tilhurtle bone, and boweth inwarde, and is receyued into the boxe or hole of the hanche bone: and at the lower & towards the Kneē there it hath two roundes, which be receyued into the concauities of the bone of the legge at the knee, called the great fossels. There is also at the knee a rounde bone called, The knee panne. Then foloweth the legge, wherein is two bones, called Focile maior, and Focile minor, the bygger of them passeth befoze, making the shape of the shinne, & it is called the shinne bone, and passeth downe

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downe making the inner ankle. The
lesse passeth from the knee backwardes,
disseending downe to the vtter ankle, and
there tozmeth that ankle. &c. The bones
of the foote are, xxvj. as thus, ffirst, next
the ankle bone is one, called in Laten
Orobalistus: next vnder that towarde
the Heele is one, called Calcany: and be-
tweene them is another bone called
Os nauculare: In the seconde warde
there be foure bones, called Raceti, as be
in the handes. In the thirde & fourth
warde be, xiiij. called Digitori: and. v.
called Pectens at the extremities of the
Toes, next to the nayles. And thus be
there in the foote, xxvj. bones, with the
Legge from the Ankle to the Knee, two in
the Knee, and one rounde and flat bone,
and in the Thye one. And thus shal
you finde in the whole Legge
and ffoote, xxx. bones. And
this suffiseth for young
Practicioners.

FINIS.

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